

HEADQUARTERS
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LOGISTICS SERVICES, GENERAL

Policy for Theater Asset Visibility

1. **Summary.** This directive:

a. Establishes overarching guidance and policy for the implementation, operation, sustainment, and enhancement of Automatic Identification Technology (AIT) and Logistics Automated Information Systems (AIS's) throughout the United States European Command (USEUCOM) Area of Operations (AOR). The end state for theater asset visibility within the USEUCOM AOR is to use AIT and AIS's to provide real-time visibility for all Department of Defense (DoD) unit movement and sustainment cargo.

b. Addresses AIS/AIT media and supporting technologies, data standards and timeliness, infrastructure requirements, business process, and program management. Additionally, this directive identifies implementing actions, and assigns responsibilities. Organizations responsible for the actions will develop supporting plans and policies.

c. Provides a framework for establishing asset visibility procedures and functions that are executed by the:

(1) Commanders in Chief (CINC), as combatant commanders, exercising directive authority for logistics as authorized in the Unified Action Armed Forces (UNAAF) and Title 10 United States Code 164.

(2) Service Components, exercising responsibilities for administration and support of assigned forces (DoD 5100.1).

(3) Other CINCs and DoD Agencies, in supporting or supported roles.

d. Identifies requirements to achieve unified application of AIT and logistics AIS's within the USEUCOM AOR.

2. **Applicability.** This directive applies to USEUCOM component commands and subordinate agents as well as all other DoD organizations and agencies deploying to/through, providing

support to or operating within the USEUCOM AOR, unless otherwise specified in operation plans or operation orders issued by USEUCOM.

3. **Internal Control Systems.** This directive contains internal control provisions but does not contain checklists for conducting internal reviews, and is subject to the requirements of the internal management control program. For USEUCOM and subordinate joint activities, the applicable internal control directive is European Directive (ED) 50-8, Internal Management Control Program.

4. **Suggested Improvements.** The proponent for this directive is the Logistics Information Systems Branch, Programs and Mobility Division, Logistics and Security Assistance Directorate, HQ, USEUCOM. Suggested improvements should be forwarded by mail to: HQ USEUCOM/ECJ4-PM-LIS, Unit 30400, Box 1000, APO, AE 09128, or via e-mail to: J4AIT@eucom.mil.

5. **References.**

a. A Layman's Practical Guide for Print Quality of Linear and Two-Dimensional Symbols, DoD Logistics AIT Office, Oct 99.

b. Defense Total Asset Visibility Implementation Plan, Nov 95.

c. DoD Directive 5200.28, Security Requirements for Automated Information Systems (AIS's), Mar 88.

d. DoD Logistics Implementation Plan for Automatic Identification Technology, Mar 00.

e. DoD Publication 4500.9-R, Defense Transportation Regulation (Part I – Passenger Movement, Aug 95; Part II - Cargo Movement, Apr 96; Part III – Mobility Apr 97; Part IV – Personal Property Aug 99).

f. DoD Publication 4500.32-R, Volume I, Military Standard Transportation and Movement Procedures (MILSTAMP), Mar 87.

g. Deputy Under Secretary of Defense, Logistics (DUSD(L)) Logistics Automatic Identification Technology Concept of Operations, Nov 97.

h. Field Manual (FM) 100-17-3, Reception Staging, Onward Movement and Integration, Mar 99.

i. Joint Total Asset Visibility (JTAV) Strategic Plan, Jan 99.

j. Joint Pub 3-35, Joint Deployment and Redeployment Operations, Sept 99.

k. Joint Pub 1-02 DoD Dictionary of Military and Associated Terms, Jun 98.

- l. JTAV Radio Frequency (RF)-Tag Data Format Specification Document, Jan 96.
- m. United States Transportation Command (USTRANSCOM) AIT Integration Plan, Jun 99.
- n. USEUCOM In-Transit Visibility (ITV) Task Force Charter, Dec 96.
- o. USEUCOM Spectrum Management Manual, Feb 98.
- p. USEUCOM Directive 64-1, Transportation, Transportation Policy & Management, Jun 00.
- q. USEUCOM Directive 100-25, Communications, Command and Control, International Maritime Satellite Commercial Telephones, Jun 00.
- r. 37th Transportation Command's, Standing Operating Procedure (SOP) for Defense Transportation Reporting and Control System (DTRACS) Operations, Apr 98.

6. **Explanation of Terms.**

a. **ASSET VISIBILITY.** The capability to collect, maintain, and display information on the identity, status, location and predicted movement of specific items in the global distribution system. It includes the capability to track requisitions, assets in storage, assets in process, assets in transit, and assets in theater.

b. **AUTOMATED INFORMATION SYSTEM (AIS).** The hardware and software used to track and process unit and non-unit equipment/cargo, passengers, medical patients, materiel, and personal property from point of origin to final destination. AIS's serve to store, transmit, receive and display data, providing users with asset visibility. AIS's provide a context, form and vehicle for the transfer and display of data that facilitates the movement of forces for command and control operations.

c. **AUTOMATIC IDENTIFICATION TECHNOLOGY (AIT).** A suite of technologies that enables the automated capture of source data for electronic transmission to and from AIS's, thereby enhancing the ability to identify, track, document and control deploying forces, equipment, personnel, and cargo. It includes but is not limited to bar codes, radio frequency identification, magnetic stripes, common access or "smart" cards, optical memory cards, touch buttons and satellite tracking devices. Within DoD logistics, these technologies facilitate the capture of supply, maintenance, and transportation information for inventory and movement management, shipment diversion and reconstitution, and personnel or patient identification.

d. **DEPLOYABLE CAPABILITY.** An AIT/AIS capability for use in temporary and/or remote/austere locations, or any location not permanently configured to accept and operate a range of AIT media (Logistics functions). Deploying units can receive the benefits of AIT and corresponding interfaces with AIS's through the use of the deployable capability. They can provide in-theater transportation, logistic, supply, and command and control capabilities while

assisting in providing ITV to units during the early stages of conflicts, contingencies, or other designated operations. (See Appendix B).

e. **ELECTRONIC DATA INTERCHANGE (EDI).** A commercial term referring to the transfer of data between different organizations using networks, such as the Internet. As more and more organizations get connected to the Internet, EDI is becoming increasingly important as an easy mechanism for organizations to move information electronically. A large percentage of DoD cargo moves via commercial means and DoD is beginning to require these carriers to provide ITV information via EDI. The dominant set of standards for EDI are the X12 standards adopted by the American National Standards Institute (ANSI).

f. **EXECUTIVE AGENT (EA).** A term used in DoD and Service regulations to indicate a delegation of authority by a superior to a subordinate to act on behalf of the superior. Designation as EA, in and of itself, confers no authority. The exact nature and scope of the authority delegated must be stated in the document designating the EA. An EA may be limited to providing only administration and support or coordinating common functions, or it may be delegated authority, direction, and control over specified resources for specified purposes. USAREUR ODCSLOG has been designated EA for AIT within the USEUCOM AOR. AIS's remain the responsibility of respective Services and Service Components unless otherwise specified in this directive.

g. **INTEGRATED PRIORITY LIST (IPL).** A list of a combatant commander's highest priority requirements, prioritized across Service and functional lines, defining shortfalls in key programs that, in the judgment of the combatant commander, adversely affect the capability of the combatant commander's forces to accomplish their assigned mission. The IPL provides the combatant commander's recommendations for programming funds in the Planning, Programming, and Budgeting System process.

h. **IN-TRANSIT VISIBILITY (ITV).** The ability to track the identity, status, and location of DoD units, and non-unit cargo (excluding bulk petroleum, oils and lubricants) and passengers; medical patients; and personal property from origin to consignee or destination across the range of military operations during peace, contingencies and war. ITV is that portion of Total Asset Visibility (TAV) that focuses on assets in the transportation pipeline. USTRANSCOM is the designated DoD focal point for ITV.

i. **OTHER DoD ORGANIZATIONS AND AGENCIES.** For the purposes of this directive, the term other DoD organizations and agencies will refer to those units, organizations and activities that operate within the USEUCOM AOR, but do not fall within CINCEUR Combatant Command authority.

j. **SERVICE COMPONENT COMMANDS.** A command consisting of the Service component commander and all those Service forces, such as individuals, units, detachments, organizations, and installations under the command, including the support forces that have been assigned to a combatant command, or further assigned to a subordinate unified command or joint task force. In this directive, the term refers to USEUCOM Service component commands: United

States Army Europe (USAREUR), United States Air Forces Europe (USAFE), United States Naval Forces Europe (USNAVEUR) and Marine Forces Europe (MARFOREUR), and the Special Operations Command Europe (SOCEUR)*.

**SOCEUR is a sub-unified command, under the guidance of this document for policy only.*

k. **SHIPPING UNIT.** One or more items of compatible commodities or items assembled into one unit that becomes the basic entity for control throughout the transportation cycle.

l. **TOTAL ASSET VISIBILITY (TAV).** The capability to provide users with timely and accurate information on the location, movement, status, and identity of units, personnel, equipment, and supplies. It also includes the capability to act upon this information to improve overall performance of logistics practices. The TAV program is designed to provide the joint infrastructure necessary for tracking assets in-process, in-storage, and in-transit. This allows both operational and logistics managers to obtain and act on information on the location, quantity, condition, movement, and status of assets throughout DoD's logistics systems.

m. **TAV TASK FORCE.** The TAV Task Force is responsible for the oversight of all aspects of TAV within CINCEUR, including hardware, software, networking, development methodologies, frequency issues, training, doctrine, policies and procedures, TAV data security, and cost/benefit analysis. The TAV Task Force is a policy and advisory group meant to complement, not compete with, USTRANSCOM as the EA for DoD ITV. (See Appendix E).

n. **USEUCOM DIRECTIVE.** A USEUCOM publication that establishes policy, assigns responsibilities, prescribes procedures and directs actions for USEUCOM activities, internal and external to the Headquarters, to include component commands.

o. **VISIBILITY SYSTEM.** Any automated information system or automated environment used to collect, maintain, and display information on the identity, status, location and predicted movement of specific items in the global distribution system; including the capability to track requisitions, assets in storage, assets in process, assets in transit, and assets in theater.

7. **Responsibilities.**

a. **USEUCOM ECJ4 will:**

(1) Provide theater policy and guidance on the use of AIS's/AIT's as they evolve and are introduced into the USEUCOM AOR.

(2) Prepare, publish, revise and update USEUCOM Directive for Theater Asset Visibility (ED 66-2), once a year or as necessary.

(3) Ensure that ED 66-2 is made available on the USEUCOM Home Page:
<http://www.eucom.mil/hq/ecj4/>, Non-Classified Internet Protocol Router Network (NIPRNET), and on the Secret Internet Protocol Router Network (SIPRNET) at:
<http://www.eucom.smil.mil/ecj4/>.

- (4) Chair the USEUCOM TAV Task Force.
- (5) Coordinate with proponent DoD Agencies and Joint Program Management Offices (JPMO) for the fielding, operation, integration, and adaptation of new AIT's to ensure interoperability of the AIT and it's interface with supported AIS's.
- (6) Address quality control measures and metrics for ensuring the production, protection, and effective reading and reporting of AIT devices in support of theater asset visibility.
- (7) Work with AIT program managers to fully integrate linear and two-dimensional (2D) bar code capability at each node in the DoD logistics chain.
- (8) Ensure that the EA maintains a deployable AIT capability to support theater-wide austere exercises and contingency requirements.
- (9) Ensure that the EA maintains a fixed Radio Frequency Identification (RFID) capability at selected nodes to support peacetime user requirements, serve as a basis for continued technology and process improvement, and provide a base for expansion to support contingency operations.
- (10) Coordinate with USTRANSCOM and ensure the use of RFID to support ITV of unit movements and other large shipments of military equipment through common user ocean and aerial ports as required.
- (11) Ensure the use RFID for visibility of container contents and movement throughout the AOR, as required.
- (12) Expand the use of commercial satellite tracking when justified by user requirements.
- (13) Continue to develop applications of current and new AIT, in coordination with the DoD AIT Program Office.
- (14) Address attainment of data timeliness criteria, including the movement of information from AIS's/AIT's to the Global Transportation Network (GTN), in supporting implementation plans.
- (15) Attain data timeliness criteria at military and commercial nodes by reviewing business processes and infrastructure requirements.
- (16) Develop a program for collecting and analyzing data timeliness and identifying impediments in attaining the criteria of the DoD Logistics Implementation Plan for AIT.
- (17) Provide monthly reports on data timeliness to the DoD Logistics AIT office with information copies to the theater component and sub-unified commands identifying major impediments in attaining the DoD data timeliness criteria.

- (18) Review the validity of the DoD data timeliness criteria on an annual basis.
- (19) Identify USEUCOM specific, deployable AIS/AIT requirements.
- (20) Ensure RFID instrumented nodes transmit data to the USEUCOM ITV server.
- (21) Ensure the USEUCOM ITV server transfers ITV data to GTN and other visibility systems as necessary.
- (22) Consider business process improvements when identifying requirements and selecting AIT.
- (23) Consider business process reengineering when integrating AIS's/AIT's into logistics business processes.
- (24) Comply with DoD AIT standards.
- (25) Reflect the importance of AIT initiatives in IPL submissions to the Joint Staff.
- (26) Identify deficiencies in the logistics support of AIT to the DoD Logistics AIT Office and the Product Manager (PM), AIT.
- (27) Identify problems concerning the steps to obtain frequency allocation and assignment for AIT devices to the DoD Logistics AIT Office.
- (28) Identify applicable operational safety limitations of AIT.
- (29) Prohibit the use of non-HERO compliant devices in the vicinity of munitions in supporting AIT implementing plans.
- (30) Coordinate theater AIT initiatives with the DoD Logistics AIT Office.

b. USTRANSCOM as Executive Agent for DoD Logistics AIT office will:

- (1) Provide accurate and timely ITV of all movements to, through or within the USEUCOM AOR (to include USTRANSCOM-operated ports within the AOR) through GTN.¹
- (2) Coordinate all development, testing, and acquisition of AIS's/AIT's in the USEUCOM AOR with USEUCOM J4 PM-LIS and the USEUCOM EA for AIT.
- (3) Attain the DoD data timeliness criteria at all USTRANSCOM nodes, both commercial and military, within the USEUCOM AOR.

¹ Global Transportation Network Operational Requirements Document, Oct 00, Page 1, para 1.1

(4) Incorporate data timeliness criteria for reporting arrival and departure of air and surface cargo at non-DoD nodes into commercial transportation contracts.²

(5) Provide monthly reports on data timeliness to the DoD Logistics AIT Office with information copies to the military services, unified commands, and Defense agencies, identifying major impediments in attaining DoD timeliness criteria.³

(6) Identify deployable AIT requirements.

(7) Acquire deployable AIT capabilities to support requirements.

(8) Maintain a deployable AIT/AIS capability that can be used to support USTRANSCOM nodes within 72 hours of notification. (This capability must meet the DoD timeliness criteria and the requirements within this document).

(9) Expand and improve use of EDI at commercial nodes for asset visibility.

(10) Ensure ITV requirements are addressed when contracting for commercial transportation in accordance with this document and the DoD Logistics Implementation Plan for AIT.

c. USEUCOM Total Asset Visibility (TAV) Task Force will:

(1) Review ED 66-2, USEUCOM's Policy on Theater Asset Visibility.

(2) Develop the theater AIS/AIT infrastructure.

(3) Ensure that implementation plans developed by USEUCOM, Service Component (USAREUR, USAFE, USNAVEUR, MARFOREUR) and Sub-Unified (SOCEUR) Commands are in accordance with this document.

(4) Identify and oversee AIT and logistics AIS integration issues, and establish implementation timelines.

(5) Advise USEUCOM J4 on all AIS/AIT issues.

(6) Comply with the DoD Logistics Implementation Plan for AIT.

(7) Provide USEUCOM J4 PM-LIS an independent assessment of Service Component and Sub-Unified Commands' implementation of ED 66-2, USEUCOM's Policy for Theater

² Department of Defense Logistics Implementation Plan for Automatic Identification Technology, Mar 00; Executive Summary, Implementing Actions, page A-3.

³ Department of Defense Logistics Implementation Plan for Automatic Identification Technology, Mar 00; Chapter 3, ITV Data Timeliness, pages 3-2 - 3-3.

Asset Visibility.

(8) Develop CINC Initiatives Fund (CIF)/Program Objective Memorandum (POM)/Integrated Priority List (IPL) documentation as needed and prepare programs and budgets to support the time phased implementation of AIS's/AIT's in the USEUCOM AOR.

(9) Oversee the fielding (NET/BOIP) and the development of training requirements for AIS's/AIT's that are fielded within the USEUCOM AOR.

(10) Assist USTRANSCOM in the development of metrics to measure adherence to the timeliness criteria set within the DoD Logistics Implementation Plan for AIT.

(11) Monitor theater-wide progress within USEUCOM in meeting DoD's data timeliness criteria.

(12) Ensure TAV Taskforce members network with appropriate DoD and civilian agencies to leverage ongoing initiatives, and to reduce the duplication of effort.

d. USEUCOM AIT Executive Agent (EA) (USAREUR ODCSLOG) will:

(1) Prepare and monitor tactics, techniques and procedures for asset visibility, following the standards and formats contained in this directive and in accordance with (IAW) the DoD Logistics Implementation Plan for AIT.

(2) Administer the contractual requirements for the installation and support of AIT.

(3) Conduct initial training for the users of AIT within the USEUCOM AOR as equipment is introduced into the theater.

(4) Support requests for AIT from the service components and other organizations and agencies on a reimbursable basis.

(5) Verify frequency allocation, assignment, and approval with service components and other supported organizations and agencies prior to the activation of any AIT device.

(6) Provide semi-annual updates on the status of frequency authorization/approval to USEUCOM J4-PM-LIS and to the USEUCOM TAV Task Force.

(7) Conduct site preparation/survey in support of USEUCOM AIT requirements.

(8) Establish and maintain Memorandums of Agreement (MOAs)/Service Support Agreements (SSAs) with service components and other supported organizations and agencies within the USEUCOM AOR.

(9) Maintain an Intra-theater AIT deployable capability; coordinating with ECJ4-PM-LIS for use on a reimbursable basis. (See Appendix B, 5a-c).

(10) Establish an AIS/AIT metrics program to ensure the validity, accuracy, and timeliness of data.

e. Service Component Commands will:

(1) Provide logistics support for the installation, maintenance, and daily operation of AIS/AIT equipment.

(2) Ensure responsible agencies within respective commands implement and enforce the policy contained within this document.

(3) Establish, monitor, and maintain AIS/AIT training programs within respective commands.

(4) Prepare and submit frequency allocation and assignment requests through respective component frequency managers and EA, and obtain host nation frequency approvals prior to the activation of any AIT device within USEUCOM's AOR.

(5) Prepare Program Objective Memorandum (POM) submissions for AIT expansion and upgrade in conjunction with this policy.

(6) Coordinate AIT/AIS funding issues, to include POM submissions, with USEUCOM J4 PM-LIS.

(7) Provide financial support for the installation, maintenance, and operation of AIT equipment to the EA as required in accordance with established MOAs.

(8) Establish, operate, and maintain an AIS/AIT infrastructure capable of meeting the DoD data timeliness criteria outlined in paragraph 10 of this document.

(9) Coordinate development, testing, and acquisition of all AIS/AIT equipment within the theater with USEUCOM J4 PM-LIS and the EA.

(10) Ensure TAV/ITV requirements are addressed when contracting for commercial transportation in accordance with this document.

(11) Establish an AIS/AIT metrics program to ensure the validity, accuracy, and timeliness of data.

(12) Publish and maintain a theater-specific asset visibility document in support of ED 66-2 and in accordance with the DoD Logistics Implementation Plan for AIT.

- (13) Integrate 2D and linear bar code capabilities at supply and transportation nodes.
- (14) Contractually require DoD standard 2D bar codes on supply and transportation documents from DoD vendors.
- (15) Use Optical Memory Cards (OMC) when justified by user requirements for accurate and timely data and process improvement.
- (16) Use RFID for standoff content visibility, of sustainment, unit movements, and other large shipments of military equipment through common user ocean and aerial ports and to support ITV of cargo when justified by user requirements.
- (17) Comply with DoD AIT standards.
- (18) Identify deployable AIS/AIT requirements.
- (19) Acquire and maintain a deployable AIS/AIT capability to support exercise and contingency requirements as needed.
- (20) Expand the use of commercial satellite tracking for ITV when justified.
- (21) Address attaining the data timeliness criteria, including the movement of information from AIS' to GTN in supporting implementation plans.
- (22) Attain the DoD AIT data timeliness criteria (see paragraph 10).
- (23) Incorporate the data timeliness criteria for reporting arrival and departure of air/surface cargo at non-DoD nodes into commercial transportation contracts.
- (24) Expand and improve the use of EDI from commercial nodes to meet DoD data timeliness criteria.
- (25) Consider business process improvement when identifying requirements and selecting AIT.
- (26) Consider business process reengineering when integrating AIT into logistics business processes.
- (27) Address quality control measures and metrics in supporting implementation plans for the use and application of AIT media.
- (28) Identify deficiencies in the logistics support of AIT to the EA and USEUCOM J4 PM-LIS.

(29) Identify problems concerning the steps to obtain frequency allocation and assignment for AIT devices to the EA and USEUCOM J4 PM-LIS.

g. Other DoD Organizations and Agencies will:

(1) Establish an MOA with the theater EA and develop procedures for asset visibility, IAW the standards and formats contained within this directive.

(2) Provide logistics and base support for the installation, maintenance, and daily operation of AIT equipment. (Unless otherwise specified in an MOA or CINCEUR order, support responsibility resides with the headquarters that exercises base operating support for each installation).

(3) Establish and maintain an AIS/AIT training program for assigned and attached personnel.

(4) Prepare and submit frequency allocation and assignment requests through applicable frequency manager and EA prior to the activation of any frequency emitting devices within the USEUCOM AOR.

(5) Prepare POM submissions for AIT expansion and upgrade in conjunction with this policy, as applicable.

(6) Provide financial support for the installation, maintenance, and daily operation of AIT equipment.

(7) Establish an AIS/AIT metrics program to ensure the validity, accuracy, and timeliness of data.

(8) Ensure TAV/ITV requirements are addressed when contracting for commercial transportation in accordance with this document.

(9) Publish and maintain a theater-specific asset visibility document in support of ED 66-2 and in accordance with the DoD Logistics Implementation Plan for AIT.

g. Joint Task Force (JTF) Commanders will:

(1) Identify strategic, operational and tactical instrumentation sites for the adoption and use of AIS/AIT during all stages of a contingency.

(2) Prioritize the location and required AIT media for identified sites/nodes, in accordance with USEUCOM's guidance, found in Table 1, Guidance for Determining Specific AIT to be used for an Operation.

(3) Include asset visibility planning factors and standards (see Appendix C) in all orders released for exercises and operations into, through, out-of, or within the USEUCOM AOR.

(4) Coordinate requests for deployable AIT capability through official message channels, with USEUCOM J4 PM-LIS Branch Chief, and EA, No Later Than (NLT) 72 hours prior to anticipated need, as directed by procedures found in Appendix B, 5c1-5.

(5) Include AIS/AIT requirements for ITV in Appendix 8, (Logistics Automation Appendix), using as a foundation, the guidance found in Appendix C of this document.

8. **In-Transit Visibility**

a. **General.** USEUCOM, Joint Task Forces, Service Component Commands, and deployed forces require accurate and responsive visibility over all personnel, unit equipment and non-unit equipment (supplies) movements affecting their operations. ITV is required for assets moving by both commercial and military transportation sources whether they originate within or outside the USEUCOM AOR. Because personnel/cargo frequently change modes and transit ports operated by different services, ITV requires a coordinated effort between USEUCOM, USTRANSCOM and Service Component Commands to maintain the ability to seamlessly track personnel and cargo from origin to destination.

b. **System Requirements.** Within the USEUCOM AOR, organizations entering personnel and/or cargo into the logistics pipeline and operators of all logistics ports/hubs/nodes are responsible for maintaining AIS/AIT that provide level 4 data to GTN. To achieve the degree of visibility outlined in paragraph c below, systems fielded in the USEUCOM AOR must:

(1) Be Defense Information Infrastructure/Common Operating Environment (DII/COE) compatible and capable of operating in a Shared Data Environment (SHADE).

(2) Be integrated to reduce redundancy, standardize data elements and definitions, and facilitate transmission of data between systems.

(3) Use AIT tools as required to minimize the need for human intervention for collecting and generating data.

(4) Be deployable.

c. **Data Requirements.** Logisticians, planners and operators at all levels require ITV information that is complete, accurate, and timely. The following represent the minimum data requirements for the USEUCOM AOR. USTRANSCOM and USEUCOM service component commands and subordinate agents are responsible for reporting these data elements through applicable AIS / AIT within the time constraints delineated in paragraph 11 of this directive.

(1) Personnel: Identify passenger name, Social Security Number (SSN), rank, service, unit assigned, current location, Unit Line Number (ULN), Unit Identification Code (UIC), origin, and destination.

(2) Cargo: Identify Transportation Control Number (TCN), DoD Identification Code (DODIC), National Stock Number (NSN), item name, commodity code, container number, Radio Frequency (RF) tag number, requisition number, UIC, ULN, weight, dimensions, origin, and destination.

(3) Strategic and Operational Movements: In addition to the requirements in (1) and (2) above, identify by ULN at level 4 detail and correlate with the operational Time Phased Force and Deployment Data (TPFDD). The following are minimum ITV, source data element requirements by mode.

NOTE: All source data must be associated with a ULN so it can be correlated with the TPFDD.

(a) Airlift: Mission number / type aircraft / quantity of personnel / quantity of wheeled vehicles / quantity of tracked vehicles / quantity of trailers / quantity of pallets / quantity of helicopters / total cargo short tons (ST) / port of embarkation (POE) / port of debarkation (POD) / departure time from POE or arrival time at POD.

(b) Rail: Train number / quantity of railcars / quantity of personnel / quantity of wheeled vehicles / quantity of tracked vehicles / quantity of trailers / quantity of containers / total cargo ST / origin / destination / departure/arrival time at origin/destination..

(c) Inland Waterway: Vessel name / quantity of supercargo personnel / quantity of wheeled vehicles / quantity of tracked vehicles / quantity of trailers / quantity of containers / quantity of bulk cargo / total cargo ST / POE / POD / departure/arrival time at origin/destination.

(d) Sealift: Vessel name / quantity of supercargo personnel / quantity of wheeled vehicles / quantity of tracked vehicles / quantity of trailers / quantity of containers / quantity of bulk cargo / total cargo ST / POE / POD / departure/arrival time at origin/destination.

(e) Ground: Convoy number / number of personnel / quantity of wheeled vehicles / quantity of tracked vehicles / quantity of trailers / quantity of trailers / quantity of containers / total cargo ST / origin / destination / departure/arrival time at origin/destination.

9. **Automated Information Systems (AIS's).**

a. AIS's capture movement data through manual or automated input and feed this source data (ULN's, UIC's, destinations, weights, cargo information, passenger manifests, etc.) to Joint TAV/ITV systems. Through a complex set of processes and an extensive network of AIS's located at various nodes throughout the logistics pipeline, USEUCOM achieves TAV.

b. Logistics related AIS's include, but are not limited to: the Global Air Transportation Execution System (GATES), Remote GATES (RGATES), Worldwide Port System (WPS), Transportation Coordinators Automated Command and Control Information System (TC-ACCIS), Cargo Movement Operations System (CMOS), Marine Air Ground Task Force (MAGTF) Deployment Support System (MDSS II) and the yet to be fielded Transportation Coordinator's Automated Information for Movement System II (TC-AIMS II).

c. **AIS Employment.** Complete, accurate and timely data input into respective AIS's at every location where cargo/personnel originate, are transshipped, or terminate, is essential for the reliability and accuracy of asset visibility systems. The following nodal systems are recommended to provide minimum ITV:

- (1) **Aerial Nodes.** GATES, RGATES, MDSSII, CMOS, and when fielded, TC-AIMS II.
- (2) **Surface Nodes.** WPS, TC-ACCIS, MDSSII, CMOS, and when fielded, TC-AIMS II.
- (3) **Inland Nodes.** TC-ACCIS, CMOS, MDSSII, and when fielded, TC-AIMS II.

10. **Automatic Identification Technology (AIT).** USEUCOM uses a suite of AIT to facilitate the automated capture of personnel, supply, maintenance, and transportation information for inventory and movement management, shipment diversion, and reconstitution. This technology includes but is not limited to: linear and 2 dimensional (2D) barcodes, optical memory cards (OMCs), radio frequency identification (RFID), Common Access Card (CAC), and satellite tracking. AIT facilitates TAV by providing increased data accuracy with minimal human intervention. (Appendix A describes the various AIT media available in-theater).

a. **AIT Employment.** Minimum AIT requirements within the USEUCOM AOR:

(1) **Linear and Two-Dimensional (2D) Bar Codes** – Each node within USEUCOM's logistics chain, including commercial vendors, will read and write Military Shipping Labels (MSLs) containing linear and 2D bar codes.

(2) **Optical Memory Cards** – OMCs will be utilized within the USEUCOM AOR when justified by user requirements for accurate and timely data and process improvement.

(3) **RFID**

(a) **RFID Tags.** All unit/sustainment containers and pallets transiting to/through or originating within the USEUCOM AOR will have an RFID tag properly attached for standoff content visibility in support of ITV when justified by user requirements. Exceptions to the use of RFID will be granted on a case-by-case basis by USEUCOM J4 PM-LIS Branch Chief, where components can justify RFID will not provide utility. RFID Tags will be properly populated, and attached per guidance found in Appendix A, Annex 5. Using units will establish recycling programs to ensure appropriate use of existing stocks.

(b) **RFID Nodal Capability.** RFID will be maintained at selected nodes (aerial/ocean ports, etc) to support peacetime user requirements, and provide a base of expansion to support contingency operations as required. RFID is not required for a node to capture ITV events if the existing AIS meets the DoD Data Timeliness Criteria (paragraph 11). Due to limited equipment and current access to supply data, all nodes within the AOR cannot be implemented with RFID. Components are to continue to identify and prioritize locations that require RFID.

(4) **Common Access Cards (CAC).** Once fielded, the CAC will be used for all unit movement passenger manifesting activities. Further guidance will follow as CAC development continues.

(5) **Electronic Data Interchange (EDI).** A large percentage of DoD cargo moves via commercial means. Currently, the bulk of this data is not captured and ITV is lost. All DoD cargo moving under commercial contract carriers transiting to/through or originating within the USEUCOM AOR are required to provide EDI change in status notifications transactions to GTN in accordance with the DoD Data Timeliness Criteria. Further exceptions to the use of EDI will be granted on a case-by-case basis by USEUCOM J4 PM-LIS Branch Chief, where components can justify EDI is not required. Further EDI guidance can be found in appendix A, Annex 7.

Table 1

Guidance for Determining Specific AIT to be Used for Operation

Operation / AIT Used	MSL/ Bar Code	OMC	RFID	CAC	EDI	Satellite Tracking
Deployment/Redeployment					X	O
-Multipack	X	X	O			
-Pallets	X	X	X			
-Containers	X	X	X			
-Vehicles	X		O			
-Personnel				X*		
Sustainment					X	O
-Multipack	X	X	O			
-Pallets	X	X	X			
-Containers	X	X	X			
Contingency					X	O
-Multipack	X	X	O			
-Pallets	X	X	X			
-Containers	X	X	X			
-Vehicles	X		O			
-Personnel				X*		

Key: X – Mandatory AIT / O – Optional AIT

*Once fielded, further guidance will follow.

(6) **Satellite Tracking Systems** - Defense Transportation Reporting and Control System (DTRACS). All vehicles equipped with DTRACS units will submit the required macro reports as delineated in Appendix A, Annex 6. Innovative use of commercial satellite tracking is encouraged throughout the AOR, to expand ITV of military shipments via all means of conveyance (truck, rail, barge, etc.) when justified.

(7) **Deployable Capability.** USEUCOM's EA will maintain and have at its disposition, two theater deployable packages for use at any site/location not permanently configured to accept and operate a range of AIT media within the USEUCOM AOR. Deploying units can then receive the benefits of AIT and corresponding interfaces with AIS's through the use of this deployable capability. The packages can provide intra-theater transportation, logistic, supply, and command and control capabilities to units during the early stages of conflicts, contingencies, or other designated operations. Coordination with USEUCOM J4 PM-LIS and the EA at least 72 hours prior to deployment, is necessary to ensure a capability best suitable for the mission at hand, see Appendix B.

(8). **AIT Nodal Capability Requirements.** Logistics nodes require the following capabilities, based on their placement within the pipeline and the guidance found in Table 1.

- (a) Installation: Read & Produce: Bar Codes (linear & 2D), RFID tags, CACs*.
- (b) Military Aerial and Sea POE & POD: Read & Produce: Bar Codes (linear & 2D), RFID tags, and CACs*.
- (c) Commercial Aerial and Sea POE & POD: EDI.
- (d) Theater Distribution Center (TDC): Read & Produce: Bar Codes (linear & 2D), RFID tags; and efficiently employ satellite tracking systems.
- (e) Theater Supply Point: Read & Produce: Bar Codes (linear & 2D), RFID tags.
- (f) Tactical Assembly Area (TAA): Read & Produce: Bar Codes (linear & 2D), RFID tags; CACs*, efficiently employ satellite tracking systems.
- (g) En Route: Satellite tracking systems; RFID interrogators at key visibility points.

**Once fielded – further guidance on use and applicability of the CAC will follow.*

11. **Data Timeliness Criteria.** As personnel and cargo move through the logistic pipeline, USEUCOM and USTRANSCOM service component commands must report status changes to GTN via applicable AIS/AIT. Status changes include but are not limited to changes in modes of transportation, arrival/departure at ports and nodes, and delivery to final destination. All military and commercial originating, in-transit, and receiving activities will report status changes in a timely manner to support logistics decision-makers and customers throughout DoD. The data

timeliness criteria listed below, apply to all logistics AIS's/AIT's and commercial contracts within the USEUCOM AOR. The criteria are as follows:

- a. **Unit Strategic Movements.** The arrival and departure of unit personnel and equipment at all nodes from origin to destination will be visible in GTN *within 1 hour of the event*.
- b. **Sustainment Airlift.** The arrival and departure of sustainment air cargo and personnel at all nodes from origin to destination will be visible in GTN *within 1 hour of the event*.
- c. **Sustainment Sealift.** The arrival and departure of sustainment ocean cargo at all nodes from origin to destination will be visible in GTN *within 4 hours of the event*.
- d. **Intratheater and CONUS Movements.** The arrival and departure at all nodes of non-unit cargo originating or terminating in a theater or CONUS will be visible in GTN *within 2 hours of the event*.

NOTE: When in doubt as to which category applies, use the most restrictive criteria. **These “time standards” begin when either the cargo, passengers, and/or equipment arrives or departs a specific location** (i.e. air: wheels-up/wheels down; ship: berths/heads out to sea; train: engine is engaged/train pulls into rail-head; truck: dispatched/cargo is off-loaded; etc.).

12. **Quality Control.** Successful application of AIT is ultimately dependent upon the personnel working at logistics nodes. Logistics personnel must uniformly accept AIT and its application to the supported AIS's and business processes. Source data availability and accuracy impact the effectiveness of all AIT and the AIS's they support. Accurate asset visibility requires adequate training and use of AIT/AIS so as to ensure: source data accuracy; bar codes that are durable, readable, and readily visible; origin validation and verification of OMCs, RFID tags, and bar codes; proper attachment of RFID tags; proper use and reuse of OMCs, and RFID tags; and initiation and termination of satellite-tracking by vehicle operators. The information that is passed to an AIS must be the same data that is on the AIT media. If changes occur to source data prior to movement, the AIS must be updated and new AIT data storage devices (i.e. MSLs and RFID tags) produced and affixed to the equipment.

- a. **Data Accuracy.** Falls under the responsibility of the initiator/shipper within the logistics pipeline, be it at the warehouse, stockyard, shipping dock, airfield or motorpool. Decision makers at all levels of command rely upon data entered into AIT media, then downloaded or passed onto AIS's, for asset visibility. This information is further fed into global systems, which would then promulgate the information - thereby compounding the effect of inaccuracy had not careful attention to detail been paid from the onset.

- b. **Data Security.** The question of “when does unclassified data become classified?” is not an easy one to answer. However, user awareness of the picture presented by aggregate, unclassified data, to the unauthorized viewer, could unwittingly give away critical operational details. Until further policy is developed, data security is at the hands of the user. Originating units should

continue to process movements IAW this and other governing directives unless otherwise directed by the supported CINC.

13. **Measurements of Performance**. Beginning the third quarter of FY00, USTRANSCOM will provide monthly reports on data timeliness to the DoD Logistics AIT Office with information copies to the Military Services, Unified Commands and Defense Agencies. These reports will also identify major impediments in attaining the DoD timeliness criteria and will be posted on the DoD Logistics AIT Office's web site (<http://isis.web-eis.com/ait/>) for the Military Services, Unified Commands and Defense Agencies to use.⁴ USEUCOM Service Component Commands and subordinate organizations and agencies are required to establish their own AIS/AIT metrics program to ensure the validity, accuracy, and timeliness of asset visibility data. These metrics programs should mirror USTRANSCOM's established business rules (parameters) for measuring data timeliness. Theater specific reports as well as USTRANSCOM reports will be reviewed and briefed at each quarterly USEUCOM TAV Task Force Meeting.

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APPENDIXES

A - Asset Visibility Enablers

Annexes

- 1 – Bar Codes
- 2 – Optical Memory Cards (OMCs)
- 3 – Common Access Card (CAC)
- 4 – Radio Frequency Data Communications (RFDC)
- 5 – Radio Frequency Identification (RFID)
- 6 – Satellite Tracking Systems
- 7 – Electronic Data Interchange (EDI)

B - Deployable Capability Guidance and Procedures

C - USEUCOM AIT Guidance for PLAN/OPORDs

D - Frequency Issues

E - USEUCOM ITV Task Force Charter

⁴ Department of Defense Logistics Implementation Plan for Automatic Identification Technology, Mar 00; Chapter 3, ITV Data Timeliness, pages 3-2 - 3-3.

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F - Acronym List

DISTRIBUTION:

P (+)

APPENDIX A

Asset Visibility Enablers

1. **General.** Asset visibility enablers include a variety of logistics information technologies, which facilitate the capture, storage, translation and transmission of vital logistics data from requisition to issue. Logistics information technologies encompass both Automated Information Systems (AIS's) and Automatic Identification Technologies (AIT's). AIT is a suite of media (Radio Frequency Identification (RFID) tags and interrogators, Common Access Cards (CAC), Bar Codes and Scanners, satellite tracking devices, etc.) that capture, store and electronically transmit asset identification information to AIS's. AIS's receive, translate and retransmit this electronic logistics data to visibility systems which then capture and store logistics information used by commanders and staffs to track and influence assets throughout the deployment and distribution pipeline.

2. **Automatic Identification Technology.**

a. **Bar Codes.** A bar code is an array of parallel, rectangular bars and spaces that represent a group of characters in a particular symbology. The bars and spaces are arranged in an order defined by the symbology. Bar codes are applied on labels, paper, plastic, ceramic, and metal by a variety of marking techniques. A reader scans the bar code, decodes it, and transfers data to a host computer. Within the Department of Defense (DoD), a common use of linear bar codes is the military shipping label which contains the Transportation Control Number (TCN) and other transportation information. For the future, DoD plans to phase in two-dimensional (2D) bar codes for selected areas of use. 2D bar codes have a greater data capacity and are more durable than linear bar codes. (See Annex 1).

b. **Optical Memory Cards.** OMCs use the optical technology popularized by audio Compact Discs (CDs) and audiovisual CD-Read Only Memory (ROM) products. Information is written to the card in increments rather than at one time. An OMC can have data written to it in a sequential order on many occasions until all available memory has been used. An OMC is similar in size to a credit card and can be easily carried. DoD activities use OMCs when extensive content detail is required, such as for multipack, air pallet, container, trailer, and rail car shipments. The Defense Logistics Agency's (DLA's) Automated Manifest System (AMS) and the Army's Standard Army Retail Supply System (SARSS) use a DoD standard OMC. The primary objective of the AMS is to facilitate automated receipt processing. OMCs are used best when a data audit trail is required or an extensive amount of data requires storage. (See Annex 2).

c. **Common Access Card (CAC)** (The DoD's Smart Card for personnel). CACs look similar to a standard credit card or drivers license. Where they differ is in the Cards ability to store information on an integrated circuit chip (ICC) containing a microprocessor located within the card. In addition to the ICC, a Card can contain other types of media such as a magnetic stripe and bar code. This allows the Card to be read and written to by different hardware systems and bar code applications. Cards are designed to hold certain essential data elements that can be updated as required to keep the card current. Cards also have the capability to keep data secure

by incorporating several layers of security such as Personal Identification Numbers (PIN), passwords, and encrypted data. For additional security, these Cards can include an individual's picture and thumb print, and, can be interrogated and written to multiple times. The cards are best used in the force projection process to track the movement of personnel and to speed up passenger processing and manifesting. For example, in Operation Cobra Gold '98 Smart Cards were used for personnel tracking, access control, manifesting, joint reception, and as an in-theater database for the Joint Task Force Commander. In most cases, DoD personnel must be present to scan the Smart Card and ensure data transfer to an automated information system. However, it is possible to build AIT readers where the individuals swipe the Smart Card through an unattended reader and then boards or disembarks strategic or theater transportation. Smart Cards can also be used to support noncombatant evacuation operations (NEO). The adoption and implementation of Smart Card Technology was directed by John Hamre, Deputy Secretary of Defense, in a signed memorandum, dated 10 Nov 1999. It called for the initial implementation of Smart Card technology to be effected as a DoD-wide CAC. The CAC would be the standard Identification (ID) card for active duty military personnel, to include the Selected Reserve, DoD civilian employees and eligible contractor personnel. It will also be the principal card used to enable physical access to buildings and controlled spaces and will be used to gain access to the Department's computer networks and systems. (See Annex 3).

d. Radio Frequency Data Communication (RFDC). RFDC are communications that combine the features of a portable data collection device and a two-way radio to send data to a remote AIS. In applications that require a real-time update to a database, using RFDC is preferred to sending data as a batch process via a modem or a landline. (See Annex 4).

e. Radio Frequency Identification (RFID). RFID is used to identify, categorize, and locate materiel automatically within relatively short distances (a few inches to 300+ feet). The RFID devices are known as tags or transponders. They contain information that can range from a permanent ID number programmed into the tag by the manufacturer to a variable 128-kilobyte memory that can be programmed by a controller using RF communications. The controller is usually referred to as a reader or an interrogator. With the current RF Tags in use, the interrogator sends a RF signal that wakes up the tag, and the tag transmits information to the interrogator. In addition to reading the tag, the interrogator can write new information on the tag, thus permitting a user to alter the tag's information within the effective range. Interrogators can be networked to provide extensive coverage for a system. (See Annex 5).

f. Satellite-Tracking Systems. A satellite tracking system provides the ability to track the exact location of vehicles and convoys. The latitude and longitude locations of trucks, trains, and other transportation assets equipped with a transceiver are transmitted periodically via a satellite to a ground station. Some systems also provide two-way communications between a vehicle operator and a ground station for safety, security, and rerouting.

(1) Satellite tracking uses a cellular or satellite-based transmitter or transceiver unit to communicate positional information, encoded and text messages, and (in the case of sensitive DoD ordnance movements) emergency messages from in-transit conveyances to the ground station. Transceiver-based technologies also permit communications from a ground station to the

in-transit conveyance. A user can compose, transmit, and receive messages with very small hand-held devices or with units integrated with computers.

(2) The following description clarifies how a satellite-tracking system works. A system has five components a subscriber unit, satellite, earth station, Network Communications Center (NCC), and logistics manager. A subscriber unit is installed on the conveyance being tracked. The unit exchanges information with an earth station via satellite. The earth station is connected to an NCC that stores information in electronic mailboxes. Logistics managers access these mailboxes to receive information from subscriber units and return information to them. (See Annex 6).

3. Automated Information Systems (AIS's).

a. **Cargo Movement Operational System (CMOS).** CMOS is one of a family of five unit-level applications that make up the Integrated Deployment System (IDS) that directly support deployment operations. CMOS automates and streamlines base level cargo movement processes for both peacetime cargo and mobility/contingency cargo. Workstations in various transportation functional areas support one-time data capture for the preparation of documentation for all modes of shipment. The specific functional areas supported include receipt (outbound and inbound)/preparation/movement of cargo, reporting of the movement to command and control elements for in-transit visibility, and unit move passenger travel. The receipt function covers originating cargo destined for outbound shipment, and inbound cargo destined for local consignment or onward movement. The preparation function covers shipment planning, packing, packaging, and preservation of material generated from the installation supply account or other units for outbound movement. The movement function involves mission planning, loading cargo on the designated conveyance, generating the required movement documentation, and furnishing move data. The electronic reporting of cargo movement makes CMOS a vital component of the Logistic community's effort to provide in-transit asset visibility. CMOS functionalities:

(1) Automatic input/output with Command and Control Information Processing System (C2IPS). C2IPS receives documentation for all modes of shipment. Activities supported include receipt, preparation, and movement of cargo; reporting of movement to C2 elements; and unit move passenger travel.

(2) Automatic input and output to Computer Aided Load Manifesting (CALM) system. CMOS receives the load planning of aircraft from CALM. This allows CMOS a standard automated capability to store and edit information on air cargo increments. It allows the user to pre-plan aircraft cargo loads. Automated Air Load Planning System (AALPS) will encompass needed CALM functionality and is the designated DoD system for load planning.

(3) Automated input and output to the Global Air Transportation Execution System (GATES). GATES interfaces with CMOS, sending and receiving information on DoD unit and truck movements. (This interface is anticipated: Jan 01).

(4) Automated output to the Global Transportation Network (GTN) places the necessary information into that system to support in-transit visibility.

(5) Automated output to Worldwide Port System (WPS). CMOS provides the data needed to document, account, and track movement of cargo through a port. This provides terminal and regional commanders with the information needed to manage movement of ocean cargo.

***NOTE:** CMOS will migrate to Transportation Coordinator's Automated Information for Movements System II (TC-AIMS II), and is the approved Installation Transportation Officers (ITO)/Transportation Management Office (TMO) module for TC-AIMS II.*

b. Global Air Transportation Execution System (GATES). GATES is a fully integrated transportation system for Air Mobility Command (AMC) to support the United States Transportation Command's (USTRANSCOM's) Defense Transportation System (DTS) 2010 Integration Plan requirements. GATES functionality includes the processing of cargo and passenger information used during the planning and execution of AMC's worldwide mobility operations. GATES transitions AMC's legacy transportation systems from a proprietary environment to an open systems environment using the DoD and Air Force mandated programming language. The new system consolidates, integrates, and modernizes existing systems and subsystems into one fully integrated, open system environment. The consolidated legacy systems are:

- (1) Headquarters On-Line System for Transportation (HOST)
- (2) Passenger Reservation and Manifesting System (PRAMS)
- (3) Consolidated Aerial Port System, II (CAPS II) (includes Remote/Deployable CAPS)
- (4) Communications Gateway

GATES provides greater support with improved efficiency and effectiveness, for the Global Decision Support System (GDSS), AMC's Deployment Analysis System (ADANS), Forward Supply Support System (FSS), Channel Requirements Quota System, Headquarters On-Line System for Transportation (HOST), Passenger Reservation and Manifesting System (PRAMS), and the Consolidated Aerial Port System (CAPS II), with more reliable software and lower maintenance costs. GATES migrated several stand-alone AMC transportation systems from a proprietary Honeywell DPS-90 hardware and software system to a client-server based architecture residing on open systems hardware. The system is designed to establish an integrated AMC corporate system. Security level is unclassified-sensitive. Until GATES completes its critical design review, this information is subject to change. GATES present and future external functionalities interfaces include:

(1) Automatic input into ADANS. As the migration system replacing several transportation systems, including CRQS and PRAMS, GATES will replace the CRQS to ADANS interface in Build One.

(2) Automatic input and output to the C2IPS. GATES will receive initial and updated airlift schedule data, load messages, and aircraft status. In addition, GATES sends sequence of events information and passenger/payload data to C2IPS. (Interface is anticipated: Jan 01).

(3) Automated input and output to the Consolidated Freight Management (CFM) system. GATES shall provide a two-way interface with this commercial system for the purpose of sending commercial movement requirements and receiving commercial freight information in movements within CONUS.

(4) Automated input and output with CMOS. GATES will interface with CMOS for the purpose of sending and receiving information on DoD unit movements. (Interface is anticipated: Jan 01).

(5) Automated interface with GDSS for dissemination throughout the AMC C2 system. GATES will receive initial and updated airlift schedule data, load messages, and aircraft status.

(6) Automated input into GTN for near-real-time, in-transit visibility on all DoD cargo and passenger movements.

(7) Automated input and output into WPS will enable sending and receiving of shipment information for missions transiting water ports. (TBD-this requirement is still being analyzed for feasibility.)

(8) Automated input and output to the Airlift Services Industrial Fund Integrated Computer System (ASIFICS).

(9) Automated output to the Logistics Information File (LIF).

(10) Automated output to International Traffic Management System (ITRAM).

(11) Automated input and output to Financial Air Clearance Transportation System (FACTS). (Includes the Enhanced Transportation Automated Data System (ETADS), Navy Material Transportation Office Operations and Management Information System (NAOMIS) and the Army Airlift Clearance Authority (AACA) ECD: TBD).

(12) Automated input and output to AALPS. (Expected completion date (ECD): Jan 01).

(13) Automated input and output to TC-AIMS II. (ECD: TBD).

c. **Remote Global Air Transportation Execution System (RGATES).** The RGATES server provided by AMC will be housed in existing facilities as the replacement for the Remote Consolidated Aerial Port Subsystem (RCAPS) legacy system. Many RGATES user locations have been authorized to receive AIT devices to assist in data collection. Remote installations will be supported by a Personal Computer (PC) workstation running Windows New Technology (NT). This platform will provide the capacity to support the database requirements of port operations in a field environment. The server will be loaded with the GATES database for the destination location. The RGATES platform will be used to support those locations that generally have various levels of communications capabilities ranging from full Non-sensitive Internet Protocol Routing Network (NIPRNET) to poor or intermittent communications capabilities. These are often also very low volume locations.

d. **Global Command and Control System (GCCS).** GCCS is an AIS designed to support deliberate and crisis planning. It is the embodiment of Command, Control, Communications, Computers, and Intelligence (C4I) for the Warfighter Concept. GCCS provides the communication connectivity that supports members of the Joint Planning and Execution Community (JPEC). It provides combatant commanders and subordinate joint force commanders' one predominant source for generating, receiving, sharing and using information. With GCCS, individuals and commanders have "point and click" access to secure information like strategic movement of forces, employment of forces, intelligence briefings and e-mail. The voluminous planning and execution information generated is supported by GCCS. Force deployment planning, and execution activities, are supported by the Joint Forces Requirements Generator (JFRG II) and the results uploaded from JFRG II to the Joint Operation Planning and Execution System (JOPES) using GCCS. GCCS improves the Joint Warfighter's ability to manage and execute humanitarian, crisis, and contingency operations.

e. **Global Combat Support System. (GCSS).** GCSS is not a "system," but GCSS will provide for the integration of combat support applications into a single GCSS environment. While GCSS provides the common environment, shared infrastructure, and shared hardware and software, the Commander in Chief (CINC)/Service/Agency projects provide applications and non-shared components. GCSS is a subset of DII. In conjunction with other DII elements including the GCCS, GCSS provides the information technology capabilities required to move and sustain joint forces. Each of these elements provides a combination of application, common environment, shared infrastructure, and hardware and software capabilities. The goal of GCSS is to provide universal secure access to information and interoperability of that information across combat support and C2 functions. The GCSS vision encompasses six essential attributes: any box; any user; one net; one picture; common services; and robust communications services. The end state is a secure, intranet environment allowing DoD users to access shared data and applications, regardless of location, supported by a robust information infrastructure. This will result in near real time C2 of the logistics pipeline; one fused picture of combat support to the warfighter; and a closed link between C2 and combat support during critical execution of an operation. A host of logistics information systems enablers are critical to GCSS. Some of the major joint programs include Joint Total Asset Visibility (JTAV), GTN, AIT, and Joint Decision Support System (JDSS).

f. **Marine Air Ground Task Force (MAGTF), Deployment Support System II (MDSSII).** MDSSII is an automated information system capable of supporting rapid military deployment anywhere in the world. MDSSII provides commanders at various echelons of the MAGTF the ability to:

- (1) Provide a unit level database capable of supporting rapid deployment of forces.
- (2) Build and maintain a database containing force and deployment data
- (3) Retrieve information in near real time, in the form of reports and adhoc queries.
- (4) Utilize AIT, to collect data and track equipment.
- (5) Interface with external databases, such as the Asset Tracking Logistics and Supply System (ATLASS), the Marine Integrated Personnel System (MIPS), CALM and the MAGTF Data Library (MDL).

This data can be maintained during normal day-to-day garrison activities and updated during plan development and execution. In addition, extracted MDSSII data provides the Joint Chiefs of Staff (JCS) and National Command Authority (NCA) with an accurate picture of the MAGTF composition to include the "sealift and airlift requirement" by passing the data through MAGTF II and TC-AIMS II.

NOTE: MDSSII will be migrated into TC-AIMS II.

g. **Transportation Coordinator's-Automated Command And Control Information System (TC-ACCIS).** TC-ACCIS is an information management system and data communications system supporting US Army deployments during both day-to-day operations and crisis situations. It focuses on providing automated support to the planning and execution functions of transporting unit equipment, personnel, and cargo under full mobilization and deployment conditions at all organizational levels. TC-ACCIS standardizes operations in the areas of data collection, shipment accountability, shipment processing, documentation, and reporting. It is predominantly a unit movement system.

NOTE: TC-ACCIS will be migrated into TC-AIMS II.

h. **Transportation Coordinator's-Automated Information for Movement System II (TC-AIMS II).** TC-AIMS II will provide an integrated information transportation system capability for routine deployment, sustainment, and redeployment/retrograde operations by employing the same DoD and Service shipment policies and procedures in peace and war and in both the active and reserve forces. This system must be integrated with unit, installation, and depot-level supply systems to manage inbound and outbound movement, documentation and requisition information. TC-AIMS II will be capable of supporting routine and surge requirements and will automate the origin shipping/receiving and deployment, sustainment, and redeployment, retrograde processes; produce movement documentation, unit move data; and furnish timely

information to major commands, transportation component commands, USTRANSCOM, and the Joint deployment community. As a DoD source movement information system, TC-AIMS II will provide data for In-Transit Visibility (ITV) and control over cargo and passenger movement. TC-AIMS II Functionality will be broken out into four separate Releases.

(1) Release 3.01 Unit Move Core: Unit Move Core Version Release 3.01 represents the requirements necessary to satisfy the Milestone IIIa decision and primarily consists of the main portion of the Unit Move functionality. Unit Move Core Version Release 3.01 is broken down into six lower level Computer Software Component (CSCs).

(a) Asset management: Asset management consists of the necessary control to manage and track assets from one unit through installation level. The ability to track and maintain organizational personnel, supply and equipment lists, equipment status reports, equipment maintenance records, vehicle and or/equipment dispatch records, and pre-positioned asset records are some of the key business process found in asset management.

(b) Movement planning: Movement planning consists of initiating, maintaining, and providing source data on equipment and personnel to Time Phased Force Deployment Data (TPFDD) systems. Processes include the functional capability to assign modes of transportation, create Unit Deployment List (UDL) and create convoy movement plans.

(c) Load planning: Load planning consists of enabling the user to develop load lists for air-load and sea-load planning. Business processes are used to develop load plans for trucks, pallets, containers, and to create actual rail load plans, which include blocking, bracing, and tie-down estimates.

(d) Movement coordination: Movement coordination provides the overall capability to request transportation and coordinate surface/air freight, passenger movement from origin to final destination. These processes include the ability for users to receive/Review movement request, schedule movement, convoy control track shipments and maintain in-transit visibility of shipments and pass related data to the Transportation Control Centers (TCCs) and GTN.

(e) Movement execution: Movement Execution provides the overall capability to receive, process, document, and initiate surface/air freight, passenger movement from origin to final destination. These processes include the ability for users to assemble assets, process assets, perform shipping, receive advanced notifications and maintain in-transit visibility of shipments and pass related data to the TCCs and GTN.

(f) System Enablers. Enablers provide common support throughout the TC-AIMS II Core CSCI. These support processes include print, help, communication protocols like TCP/IP and SMTP, security (auditing, encryption, etc.), source data automation (AIT).

(g) Database Optimization Unit Move. The Database optimization Unit Move migrates Unit Move Core capability from a 2-Tier, DII/COE level 2, C2 environment, to n-Tier, DII/COE level 5, web capable, C2 environment. Critical functional capabilities, as identified by

components, will be re-implemented to increase system effectiveness and to meet DII/COE and SHADE requirements, and improve automated C2 compliance.

(h) CMOS Co-Host. Interim ITO/TMO capabilities will be achieved by co-hosting the current USAF CMOS applications with the database optimization Unit Move capability and developing an API for CFM-ETA. This effort will provide TC-AIMS II users with "apparent" integrated Unit Move and ITO capabilities.

(2) Incremental Development Packages (future releases):

(a) Enhanced Unit Move capabilities will be added to the database optimization Unit Move product based on CMB priorities and approval. The JRO will develop IDPs containing detailed definitions for implementation by the TC-AIMS II JPMO development contractor. As currently approved by CMB, capabilities which may produce one or more IDPs are: Maritime Pre-position Force, vehicle fleet management, schedule and de-conflict convoys, convoy map graphics, calculate container/pallet requirements, use of SMART cards and additional system interfaces.

(b) ITO/TMO capabilities will be added to the database optimization Unit Move product based on CMB priorities and approval. The JRO will develop IDPs containing detailed definitions for implementation by the TC-AIMS II JPMO development contractor. As currently approved by the CMB, capabilities which may produce one or more IDPs each are: produce movement documents, peacetime passenger processing, carrier performance, Navy CRIF, MRM-15 enhancements, REPSHIPS, transportation and installation activity schedules, carrier and ITO performance metrics, packaging instructions & reference tables, customs documents, container management, and additional system interfaces. This capability will replace component ITO/TMO legacy systems.

(c) Theater Operations capabilities will be added to the database optimization Unit Move product based on CMB priorities and approval. The JRO will develop IDP's containing detailed definitions for implementation by the TC-AIMS II JPMO development contractor. As currently approved by CMB, capabilities which may produce one or more IDP's each are: convoy scheduling, vehicle load planning, movement control team operations, mode operations, shipment management module, operational movement programming, and additional system interfaces. This capability will replace component Theater Operations legacy systems.

i. **Worldwide Port System (WPS).** WPS is designed to support cargo documentation and tracking at common user ocean terminals. It also supports the requirements of regional commanders for oversight and management of ocean terminals. The responsibility for this function falls under the Military Traffic Management Command (MTMC) with the U.S. Army Forces Command (FORSCOM) and the U.S. Navy utilizing WPS at select locations. The worldwide terminal mission includes the accountability, documentation, and management of common-user cargo and unit equipment that is moving internationally by ocean transportation, in support of the DoD and other governmental Agencies' objectives, during peace and war. The mission requires strict accountability of cargo. Accountability continues during subsequent

loading aboard a ship for transportation to a distant port of debarkation and ends when cargo departs the SPOD en route to its final destination. Additionally the mission requires the transmission of transportation data between terminals. This data transmission identifies what cargo has been loaded aboard a given ship. The Ocean Cargo Manifest information is utilized by the receiving terminal and other organizations in the theater of operations to support the arrival and movement of cargo to its final destination. The information developed through these processes at ocean terminals directly support ITV of cargo.

3. Visibility Systems.

a. **Global Transportation Network. (GTN).** USTRANSCOM's GTN gives its customers, located anywhere in the world, a seamless, near-real time capability to access and employ transportation and deployment information. GTN is an automated command and control information system that supports the family of transportation users and providers, both DoD and commercial, by providing an integrated system of in-transit visibility information and command and control capabilities. GTN collects and integrates transportation information from selected transportation systems. The resulting information is provided to the NCA, CINCs, USTRANSCOM, its component commands, and other DoD customers to support transportation planning and decision-making during peace and war. In keeping with modern technology, GTN is completely available on the Internet World Wide Web ([HTTPS://www.gtn.transcom.mil](https://www.gtn.transcom.mil)), given proper authentication. GTN is the ITV source for JTAV. Theater transportation systems will feed GTN, which provides upward reporting to JTAV and GCCS.

b. **Joint Total Asset Visibility (JTAV).** As it's name clearly states, JTAV provides a joint total asset visibility capability to the warfighter. It has the capability to fuse information from selected AIS's into one picture. Through JTAV, theater logisticians can access in-transit, in-storage, and in-process information in GTN, the inventory control point AIS, and the Logistics Information Processing System (LIPS). Additionally, JTAV interfaces with Services' logistics databases to capture visibility of assets held by theater forces, and, with the theater transportation information system to provide visibility of shipments within the theater. JTAV merges this information with in-theater unit information and other in-theater-related logistics information for both inbound and outbound assets. The Joint Force Commander (JFC) uses the logistics information in JTAV to enhance planning for the deployment of forces and materiel, the diversion of forces and materiel in-transit, and, if required, to meet changing contingency requirements. The information provided by JTAV can also be used for the management of in-theater assets, cross leveling and distribution, and for the redeployment of forces and retrograde of materiel. JTAV is completely available on the internet world wide web at <https://137.95.190.81/c4i/jtav>, given proper authentication. For more information on JTAV see their website at [HTTP://www.acq.od.mil/log/jtav](http://www.acq.od.mil/log/jtav).

c. **GCCS COMMON OPERATIONAL PICTURE – COMBAT SUPPORT ENHANCED (GCCS COP-CSE).** (Merging GCCS with GCCS.) GCCS provides combatant commands and JFCs the ability to provide military information rapidly to the NCA, as well as other supporting commands. The COP, a graphical depiction of warfighting information available in an Area of Responsibility (AOR), is a key tool for commanders in planning and conducting

joint operations. The COP enhances the flow of information between the NCA, Joint Staff and commanders by amplifying Situation Reports (SITREPs), Operations Reports (OPREPs), and other key reports. The real value of the COP is in displaying battlespace information through graphics that link to detailed information which reports such as SITREPs and OPREPs are unable to display. Part of the GCSS strategy is developing the CSE component of the COP, incorporating data feeds from JOPES, GTN, and JTAV and other existing systems. The Defense Information Systems Agency (DISA) has already developed the first version of the CSE component for the COP by incorporating these data feeds. The Joint Staff J4 will then capture and prioritize functional CINC requirements for inclusion and develop further versions. Simply put, COP-CSE, provides logistics commanders and staffs a graphical interface in which they can drill down to obtain detailed logistical information (i.e. level 6) commensurate to that available to operators through the current COP.

ANNEX 1

Bar Codes

1. **General.** Bar Codes are an array of parallel, rectangular bars and spaces that represent a single character in a particular symbology. The bars and spaces are arranged in an order defined in the symbology. Currently bar codes are applied on labels that are placed on paper, plastic, ceramic, and metal by a variety of marking techniques. A reader scans the bar code, decodes it, and transfers data to a host computer. Multiple bar codes can be placed on a single label, each representing a different data field. Bar codes are best used to capture initial source data and will be attached to all items, equipment, and shipments moving in a force projection operation. Printing, labeling and scanning bar codes is manpower intensive and time consuming in the force projection process. Bar codes must be printed and affixed to equipment in the earliest possible stage of deployment/redeployment and sustainment to minimize manual and redundant input of data. There are two types of bar codes used within the Department of Defense (DoD), linear and two-dimensional (2D).

a. **Linear Bar Codes.** Linear bar codes are normally limited to about 20 characters. They are used to represent key data elements that serve as a point of reference in a central database. DoD uses Code 39 as the standard linear symbology. Linear bar codes are traditionally limited to approximately 28 characters. Scanning a bar code permits automated access to the information in the database. Linear bar codes provide item identification and document control information for individual items and shipments. Linear bar codes can be written to once and read multiple times.

b. **2D Bar codes.** 2D bar codes have a greater data storage capacity than linear bar codes. 2D bar codes include both stacked and matrix codes. Current 2D bar codes can store up to 1,850 characters (approximately 17 Transportation Control Numbers (TCNs)) in a single symbol. 2D bar codes can be written to once and read multiple times. The 2D bar code also has a damage correction capability not present in linear bar codes. There is enough redundant data stored on the 2D bar code to allow for successful interrogation even after the label is damaged. The amount of data written to the 2D bar code can affect this capability. 2D bar codes are a new technology in the DoD AIT environment. The DoD Logistics Implementation Plan for AIT requires that all DoD logistics nodes develop the capability to read and write to both linear and 2D bar codes. In force projection operations the 2D bar code will often be seen on the military shipping label. Transportation Coordinator's Automated Information for Movements System II (TC-AIMS II) will have the capability to produce and read 2D bar codes.

2. **Format / Standards.**

a. **Bar Code:** Automatic Identification Manufacturers' BC-1 (Code 39) is the standard linear symbology used by DoD.

b. **2D Bar Code:** Portable Data File 417 (PDF-417) is the DoD 2D bar code standard.

ANNEX 2

Optical Memory Cards (OMC)

1. **General.** OMCs use the same laser technology as audio Compact Discs (CDs). Currently, OMCs are credit card sized and shaped. OMCs can have data written to them in sequential order and are reusable, until all available memory is filled. Users write data on the card with a narrowly focused, high-intensity beam (i.e. a laser). A low-power light beam reads the pits created during the writing process. The OMC currently has a 2.4-megabyte data capacity. Current OMC limitations include the inability to modify data on the card (once written, it cannot be changed). Data updates require the entire file to be rewritten to another portion of the card.

2. **Using the OMC.** OMCs are used to enhance the speed and accuracy of processing large volume shipments. They are best used when a data audit trail is required or an extensive amount of data has to be stored. For example, as items are stuffed into a container an operator scans the attached bar codes to capture initial source data. Once the container is loaded all scanned data is written to an OMC and the OMC is placed in the packing list shipping envelope. Data is then passed through an Automated Information System (AIS) to update the Global Transportation Network (GTN) and the Joint Total Asset Visibility System (JTAV). OMCs are scanned at various nodes in the deployment pipeline to provide a detailed content list of containers. OMCs can be used at major supply depots in conjunction with the Automated Manifest System (AMS). As items for a specific location are placed in multipacks, the supply accountability bar codes are scanned. The data and associated transportation information is placed on an OMC which serves as a packing list for that multipack. As multipacks are placed on an air pallet or loaded into a container, another OMC, and usually a Radio Frequency Tag (RFID) tag, are produced to act as a consolidated packing list for all pallet/container items. The OMCs contain supply and transportation data for receipt processing, discrepancy reporting, and reconstituting shipment data and documentation. They may accompany air pallets, trucks, and seavan containers between selected depots and supply support activities and are returned to Defense Logistics Agency (DLA) for reuse according to established procedures. OMCs are relatively inexpensive, contain large amounts of data, are reusable, and are relatively stable and unaffected by climatic variations. Units employing OMCs must establish recycling procedures to ensure the full potential of this AIT media.

3. **Format / Standards.** The DoD Logistics Implementation Plan for AIT recognizes the Drexler European License Association (DELA) format for the OMC.

ANNEX 3

Common Access Card (CAC)
(The DoD's Smart Card for Personnel)

1. **General.** Similar to a credit card, the CAC stores information on an Integrated Circuit Chip (ICC) containing a microprocessor. Individually carried cards may contain several other types of media: a bar code, magnetic strip, digitized photo, and printed information. Thus, a single Card can access different hardware systems utilizing reader/writers and bar code applications. Adding the card holder's photograph, printed name and signature further enhances its security features. These cards are now available with up to 64 kilo-bytes (K) of information through the Automatic Identification Technology (AIT) contract. The cards were not designed to hold large amounts of data, but to hold data elements key to the capturing of pertinent personnel, logistical and medical information. They offer a read/write capability, the advantage of this is the ability to update, delete and modify data on the ICC and magnetic strip.

a. **Recent Developments.** The adoption and implementation of smart card technology was directed by Dr. John Hamre, Deputy Secretary of Defense, in a signed memorandum, dated 10 Nov 1999. It called for the initial implementation of smart card technology to be effected as a Department of Defense (DoD)-wide CAC. The CAC will be the standard Identification (ID) card for active duty military personnel, to include the Selected Reserve, DoD civilian employees and eligible contractor personnel. It will also be the principal card used to enable physical access to buildings and controlled spaces and will be used to gain access to the Department's computer networks and systems. To ensure full and consistent use of existing capabilities and efficiencies, the CAC will be issued and maintained using the infrastructure provided by the Defense Enrollment Eligibility Reporting System (DEERS) and the Real-time Automated Personnel Identification System (RAPIDS). The DoD Chief Information Officer (CIO), with the assistance of the Under Secretary of Defense (Personnel and Readiness) is assigned responsibility to coordinate the physical design of this new CAC using smart card technology.

b. **Other Uses.** In response to the increasing threat to networks and computer systems, the Deputy Secretary of Defense also called for the adoption of CAC as DoD's primary platform for the authentication tokens required for certificates and as private keys for digital signature and access authentication. He authorized the DoD CIO to modify previously issued Public Key Infrastructure (PKI) guidance, as appropriate, to incorporate and accommodate use of the CAC. Initial implementation of the CAC is anticipated at multiple locations no later than December 30, 2000. In addition, the DoD CIO was tasked to develop a CAC Execution Plan for Dr. Hamre's approval within 120 days of the signed memorandum. That plan will address configuration management, a requirements planning methodology, and the use of functional community panels to ensure broad communication and cross-functional integration.

2. **Format / Standards.** Recent developments in smart card technology use the American National Standards Institutes' (ANSI) Accredited Standards Committee (ASC) X12 format and the International Standards Organization 7816 as the smart card standard, however, there are currently no set DoD standards for the CAC.

ANNEX 4

Radio Frequency Data Communication (RFDC)

1. **General.** RFDC are communications that combine the features of a portable data collection device and a two-way radio to send data to a remote Automated Information System (AIS). In applications that require a real-time update to a database, using RFDC is preferred to sending data as a batch process via a modem or a landline. RFDC is an Automatic Identification Technology (AIT). It is a means for transferring data in real time among AIS's/AIT media and allows operators to update and access AIS databases remotely with two-way radio communications. However, RFDC that is not compliant for Hazards of Electromagnetic Radiation to Ordnance (HERO) may not be used in the vicinity of munitions and hazardous materials.

2. **History.** Prior to RFDC's introduction to U.S. European Command (USEUCOM) during the operational prototype, RFDC had been successfully employed to enhance the capabilities of Standard Base Supply System (SBSS) and Cargo Movement Operations System (CMOS) at integrated supply and transportation facilities. It was also successfully used by the Military Traffic Management Command (MTMC) to provide operators remote access to World-Wide Port System (WPS) during cargo receipt operations. Since its introduction, RFDC has significantly expanded to other operational environments.

3. **Benefits.** RFDC permits remote real-time interface between AIT devices and the supported AIS. This interface allows operators with Hand Held Terminals (HHTs) to:

- a. Collect and pass data from AIT media and update an AIS database;
- b. Extract data from an AIS database remotely and apply the data to a bar code, Optical Memory Cards (OMCs), Radio Frequency Identification (RFID) tag, or other AIT media;
- c. Eliminate batch downloading of data collected and stored in an HHT;
- d. Extract data from an AIS database, view the data on the scanner's screen, and use the information to support other business processes;
- e. Reduce dependence on manual processing and printed documents.

NOTE: An HHT is a peripheral device that facilitates remote access to and update of an AIS database by an operator using RFDC.

4. **Format / Standards.** There are no Department of Defense (DoD) standards for RFDC technology.

ANNEX 5

Radio Frequency Identification (RFID)

1. **General.** Radio Frequency (RF) is a relatively new approach to identify, categorize, and locate materials within relatively short distances (a few inches to 300+ feet). RF capabilities - particularly those provided by active tags - are beneficial when a user needs to locate and redirect individual containers or needs “standoff” visibility of container contents (without opening the container). RFID may also be used to support customers in a forward area with inadequate systems or communications infrastructure and to facilitate the logistics Automated Information System (AIS) capture of asset data within certain time limitations. RFID technology is divided into two categories of data storage and retrieval systems, passive and active.

a. **Passive systems** generally require line-of-sight interrogation of powerless, inexpensive, low-capacity (20 bytes) transponder devices. Passive systems have a limited data capacity and limiting line-of-site requirement. However, they do offer capabilities that may be applicable to military logistics applications. With the advent of improving technology, passive systems are approaching the following performance characteristics of active systems.

b. **Active systems** are omnidirectional and require moderately expensive, high-capacity (126 kilobytes) transponder devices. Active technology has three characteristics significant for military operations. First, RFID tags are effective portable databases. Second, the tags facilitate the rapid transfer of data to AIS's. Finally, active technology offers the only standoff, omnidirectional capability to collect data at distances of 300 feet or greater.

2. **How they work.** When an RFID tag is populated at it's point of origin, with supply / transportation document data from a depot's AIS, or unit movement data from deployment systems, data is sent to a Regional In-Transit Visibility (RITV) server. The server creates a file for each tag and transmit this data to the Global Transportation Network (GTN) and the Joint Total Asset Visibility System (JTAV). As tagged shipments depart their origin, RFID interrogators remotely record and report the tag's Identification (ID) number and the date/time of interrogation to the RITV server updating the tag file. Instrumented en route notes continually record and report the passage of shipments. Units employing RFID Tags must establish recycling procedures to ensure the full potential of this AIT media.

3. **Format / Standards.** The following are the minimum required data elements for RFID:

a. **License Plate:** Lead Transportation Control Number (TCN), container or pallet number, Port of Embarkation / Debarkation (POE/D), consignee, consignor, Hazardous Materiel (HAZMAT) identification, and transportation priority.

b. **Transportation Control and Movement Document (TCMD) Data:** 80 card column prime entry, In Accordance With (IAW) DoD 4500.32-R, Volume I, Appendix D.

c. **Commodity Data:** Document number, National Stock Number (NSN), nomenclature, Routing Identifier Code (RIC), Line Item Number (LIN), quantity, and unit of issue.

ANNEX 6

Satellite Tracking Systems

1. **General.** A satellite tracking system provides the ability to track the exact location of vehicles and convoys. The latitude and longitude location of trucks, trains, and other transportation assets equipped with a transceiver are transmitted periodically via a satellite to a ground station. These systems also provide two-way communication between a vehicle operator and a ground station for the purpose of safety, security, and re-routing.

a. **Defense Transportation Tracking System (DTTS).** DTTS ensures the safe and secure movement of all Department of Defense (DoD) sensitive conventional arms, ammunition and explosives. Other shipments can employ DTTS with advanced planning and coordination. DTTS uses satellite technology and around-the-clock staff oversight to support intransit visibility requirements. Periodic satellite positioning and other messages, coded or text, are transmitted to a tracking station from a cab mounted transponder. Position data is provided to the Global Transportation Network (GTN).

b. **Defense Transportation Reporting and Control System (DTRACS).** The purpose of the DTRACS system is to provide communication between vehicle operators and decision makers while providing in-transit visibility of cargo within the theater. It is a unique command and control tool that assists with the provision of safe, efficient and timely transportation within the European Theater. Functional DTRACS system will be activated on all missions. All vehicles equipped with DTRACS units will submit the required macro reports.

2. **Format / Standards.** What follows are the required macros for In-Transit Visibility (ITV):

- (a) macro 9 – stopover
- (b) macro 10 – departure convoy/single truck (include RF tag data if available)
- (c) macro 11 - departure vehicle in convoy (include RF tag data if available)
- (d) macro 12 - arrival single vehicle/convoy (include RF tag data if available)
- (e) macro 23 - convoy vehicle change
- (f) macro 24 - vehicle load change
- (g) macro 60 – report changed bumper number

**If shipment units have RFID tags, the RFID tag numbers will be entered into the DTRACS unit using the appropriate macros for departure and arrival.*

ANNEX 7

Electronic Data Interchange (EDI)

1. **General.** A commercial term referring to the transfer of data between different organizations using networks, such as the Internet. As more and more organizations get connected to the Internet, EDI is becoming increasingly important as an easy mechanism for organizations to move information electronically. A large percentage of Department of Defense (DoD) cargo moves via commercial means and DoD is beginning to require these carriers to provide In-Transit Visibility (ITV) information via EDI. The dominant set of standards for EDI are the Accredited Standards Committee (ASC) X12 standards adopted by the American National Standards Institute (ANSI).

2. **Format / Standards.** The ANSI ASC X12 standards have varying degrees regarding the levels of implementation. The formats within the United States differ according to the mode of transportation used (200/300/800 series). USEUCOM is not mandating a specific format but each carrier must provide the following minimum information to the Global Transportation Network (GTN) according to the DoD timeliness criteria:

(a) Cargo Information: Transportation Control Number (TCN), Carrier Shipment Number, Carrier Name, DoD Identification Code (DODIC), National Stock Number (NSN), item name, commodity code, container number, Radio Frequency Identification (RFID) tag number, requisition number, Unit Identification Code (UIC), Unit Line Number (ULN), weight, dimensions, origin, and destination. It is understood that different carriers will use different data elements and tracking numbers. The key is to make the association through one of these data elements so GTN can track the movement of the cargo and provide cargo content information.

(b) Movement Information : Mission number, TCN, Estimated Time of Arrival (ETA), Departure from the Depot/Installation, arrival at the Port of Embarkation (POE), departure from the POE, arrival at the Port of Debarkation (POD), departure from POD, and arrival at the ultimate consignee.

3. **Procedures.** Assistance with contractual language and data feeds to GTN will be coordinated through USEUCOM J4 PM-LIS. The use of EDI for DoD cargo is a new venture. Standard procedures and formats will be developed as this endeavor evolves. It is important to note that one standard may never be a reality due to the use of different carriers with varying capabilities.

APPENDIX B

USEUCOM Theater Deployable Capability**1. General.**

a. Locations not configured permanently for Automatic Identification Technology (AIT) operations will be supported by a deployable package that can provide temporary AIT capability within 72 hours. A complete deployable capability with all packages provides the ability to read and write linear and 2 dimensional barcodes, Optical Memory Cards (OMCs) and Radio Frequency Identification (RFID) tags, it includes related communications, print and power capabilities. (This requirement is independent of USTRANSCOM's capabilities. USTRANSCOM, MTMC, and AMC will have at their disposition deployable kits for use in support of strategic ports within the theater as needed).

b. Ports that do not routinely process large amounts of containerized shipments or are used only during contingencies will be supported by a deployable package. For example, small ports used infrequently as well as seaports used primarily during contingencies do not meet the initial requirements for a permanent AIT capability, will be supported by a deployable capability. The deployable package will also be used to provide an AIT capability at Air Force and Navy installations that are not part of the baseline AIT infrastructure. In addition, deployable packages will also be obtained to deploy with Army and Marine Corps units if their home locations are permanently configured for AIT operations.

c. The deployable package serves two basic situations:

(1) First, it provides a temporary AIT capability at austere locations, such as bare base or unimproved port facilities, where communications, power, and other infrastructure elements are inadequate.

(2) Second, it enhances movement operations at locations, such as established ports and military installations, that have adequate power and communications capabilities but do not have adequate AIT instrumentation to facilitate data capture and transfer, so as to provide the data timeliness required by the Department of Defense (DoD) Logistics Implementation Plan for AIT.

2. Deployable Package Composition. The composition of each package provides for one/several AIT media with the necessary communications and personnel. Conceptually, the packages should be built with a basic level of capability and support that is readily available and easily transportable. A small/basic package should be supportable from a personnel perspective so that operational personnel are not taken away from their primary duties to operate the system. Consistent with the nature of the operation and any expected build-up of support, packages can be tailored to provide temporary capabilities, or can provide stop-gap capabilities pending the arrival of more robust, permanent infrastructure. Placement of deployable packages at central locations allows for immediate deployment capability. Similarly, the availability of trained personnel is key in the successful implementation of these packages.

a. **Austere Kit.** The deployable capability for austere locations includes the following packages: RFID, Automated Manifest System (AMS), Satellite communications, and administrative.

(1) RFID package includes hand held and fixed interrogators, charging units, docking stations, and other components to read and write RFID tags.

(2) AMS package includes components to read and write OMCs.

(3) Satellite communications package includes antennas, software, and other equipment to provide International Maritime Satellite (*INMARSAT) service for up to 50 mobile users. It provides classified and unclassified voice, data, and video capabilities.

(4) Administrative package includes printers, copiers, telephones for secure communications, facsimile machines, and an uninterrupted power supply, and a portable power unit. It has components to provide connectivity with appropriate DoD systems. It also includes all elements to provide full AIT instrumentation at any location, including devices for standalone capability.

** INMARSAT devices and communications will be employed in accordance with ED 100-25, International Maritime Satellite (INMARSAT) Commercial Telephones.*

b. **Port kit.** The deployable capability to support established ports, both aerial and sea, includes RFID, AMS and administrative packages. (See 2a(1), (2), (4) above). It provides similar capabilities as the austere location kit except the enhanced power and communications are excluded.

c. **Installation kit.** The installation kit includes only the RFID and administrative packages, to be deployed to provide an RFID capability at Air Force and Navy installations that are not part of the baseline AIT infrastructure and are not used as port facilities. In addition to excluding the communications package, the installation kit also does not include the AMS package.

3. **Deployable Capability In-Theater.** USEUCOM's AIT Executive Agent (EA) will maintain and have at its disposition, two deployable packages for use in temporary or remote locations, or at any site/location not permanently configured to accept and operate a range of AIT media. Deploying units can then receive the benefits of AIT and corresponding interfaces with AIS's through the use of these packages. The deployable capability can provide in-theater transportation, logistic, supply, and command and control capabilities to units during the early stages of conflicts, contingencies, or other designated operations.

4. **Advanced Planning.** Due to the wide variety of AIT supporting USEUCOM components, advance planning is essential to ensure that:

a. Central authority is established to manage deployment requirements and operations;

- b. Procedures are in effect to ensure the availability of deployable packages (with necessary hardware, software, and communications connectivity), to establish independent operational capability once deployed;
- c. Trained personnel are available to deploy with the package;
- d. Requesting unit/agency has obtained the necessary frequency approval(s) for deploying AIT with frequency requirements, from their frequency manager; and
- e. Support agreements for technical assistance, funding, and operational support, are established to ensure continuity of operations upon deployment.

5. **Procedures for Requesting Deployable Capabilities**

a. Deployable AIT requirements must be identified in Planning Orders and Operation Orders (PLANORDs/OPORDs), and included in the earliest feasible movement flow to ensure maximum In-Transit Visibility (ITV) throughout all phases of deployment, sustainment and redeployment.

b. Requirements for AIT installation or use of deployable AIT packages will be coordinated with the USEUCOM EA through USEUCOM J4-PM-LIS Branch Chief, No Later Than (NLT) 72 hours prior to required date.

c. Requests for deployable AIT capabilities will be submitted via the Automated Messaging Handling System (AMHS) NLT 72 hours prior to required date.

(1) Addressees: HQ USEUCOM //ECJ4-PM// and CDRUSAREUR DCSLOG HEIDELBERG GE//AEAGD-LT//.

(2) Subject line should read: REQUEST FOR DEPLOYABLE AIT CAPABILITY.

(3) Identify operation, site location and function, environment: operation: mission name/number; site: city/country, and function (i.e. aerial port/seaport/forward staging base, etc.); environment: available infrastructure (i.e. power/communications) in paragraph 1.

(4) Identify required AIT (RFID, OMC, bar codes, Defense Tracking Reporting and Control System (DTRACS), etc.) capability in paragraph 2.

(5) Identify Point of Contact (POC), and fund site for requested services.

NOTE: Support will be provided on a reimbursable basis, or IAW existing MOAs.

APPENDIX C

USEUCOM Automatic Identification Technology (AIT) Guidance for**Planning Orders and Operation Orders PLANs/OPORDs**

General. Required asset visibility planning factors and standards for deployments into, through or out-of USEUCOM's Area of Responsibility (AOR) are described below. The following paragraphs will be used as a template and be included in all PLANs and OPORDs released for exercises and operations within the USEUCOM AOR. This information is available on the USEUCOM J4 PM-LIS unclassified website at: <http://www.eucom.mil/hq/ecj4/index.htm>, and the classified website at: <https://www.eucom.smil.mil/hq/ecj4/index.htm> under the heading: AIT Guidance for PLANs/OPORDs.

(U) Logistics Automation: IN-TRANSIT VISIBILITY (ITV)

(U) References:

- a. Department of Defense Logistics Implementation Plan for AIT, Mar 00
- b. DUSD(L) Logistics Automatic Identification Technology Concept of Operations, Nov 97
- c. USEUCOM ITV Task Force Charter, Dec 96
- d. Defense Total Asset Visibility Implementation Plan, Nov 95
- e. Joint Total Asset Visibility (JTAV) Strategic Plan, Jan 99
- f. JTAV Radio Frequency Tag Data Format Specification Document, Jan 96
- g. 37th Transportation Command's, Standing Operating Procedure (SOP) for Defense Transportation Reporting and Control System (DTRACS) Operations
- h. United States Transportation Command (USTRANSCOM) AIT Integration Plan, Jun 99
- i. DoD Publication 4500.32-R, Volume I, Military Standard Transportation and Movement Procedures (MILSTAMP), Mar 87
- j. DoD Publication 4500.9-R, Defense Transportation Regulation (DTR) (Part I – Passenger Movement, Aug 95; Part II - Cargo Movement, Apr 96; Part III – Mobility Apr 97; Part IV – Personal Property Aug 99)

k. DoD Directive 5200.28, Security Requirements for Automated Information Systems (AIS's), Mar 88

l. Joint Pub 3-35, Joint Deployment and Redeployment Operations, Sept 99

m. Joint Pub 1-02 DoD Dictionary of Military and Associated Terms, Jun 98

n. Field Manual (FM) 100-17-3, Reception Staging, Onward Movement and Integration (RSOI), Mar 99

o. USEUCOM Spectrum Management Manual, Feb 98

1. (U) Situation. See Annex D, Situation. This appendix establishes overarching guidance and policy for the implementation, operation and sustainment of AIT and logistics AIS for ITV throughout the AOR for this plan. *(Identify any significant factors that may influence Logistics Automation (ITV/TAV) activities in support of the PLANs and/or OPORDs. Use the following subparagraphs to the extent necessary).*

a. (U) Enemy. See Annex C.

b. (U) Friendly. See Annex C.

2. (U) Execution.

a. (U) Concept of Operations.

(1) (U) To ensure ITV of all deploying cargo, personnel, and equipment, DoD components and agencies will capture, process, and transmit shipment information in electronic format to the Global Transportation Network (GTN). To achieve this action, maximize the use of Joint and Service specific AIS's. Deployable AIT requirements must be identified and included in the earliest feasible movement flow to ensure maximum ITV throughout all phases of deployment, sustainment and redeployment. Requirements for AIT installation or use of deployable AIT capabilities will be coordinated through USEUCOM J4 PM-LIS Branch Chief No Later Than (NLT) 72 hours prior to required date. Support will be provided on a reimbursable basis, or In Accordance With (IAW) existing Memorandums of Agreement (MOAs). Plan to operate in austere conditions without power or communication capabilities or infrastructure.

(a) (U) For cargo and equipment moving to or from Joint Operating Area (JOA), shippers must comply with the provisions of DoD regulation 4500.32R MILSTAMP. Units will attach Military Shipping Labels (MSLs) with linear and/or two-dimensional bar codes (IAW DoD 4500.32-R, Volume I, 2-B-33) to all rolling stock, pallets, and containers. For unit identification code (UIC) and unit line number (ULN) movements, units will ensure that mobility transportation control numbers (TCN) are created incorporating the UIC/ULN into the TCN IAW DTR Part III and DoD Regulation 4500.32R, Appendix G.

(b) (U) In addition, radio frequency identification (RFID) tags will be created and attached to all shipping containers and air pallets moving to, through or originating within the JOA. Radio Frequency Identification (RFID) equipment will be installed at joint critical nodes IAW PLANORD and paragraph 18.c of this order. Exceptions to the use of RFID will be granted on a case-by-case basis, where commanders can justify that RFID will not provide utility. Minimum data format for an RFID tag includes following elements: "license plate" data, Transportation Control and Movement (TCMD) data, and commodity:

1. (U) License plate data includes the lead TCN, container or pallet number, Port of Embarkation (POE), Port of Debarkation (POD), consignee, consignor, Hazardous Materiel (HAZMAT) identification, and transportation priority.

2. (U) TCMD data includes the 80 card column prime entry according to DoD 4500.32-R, Volume I, Appendix D.

3. (U) Commodity data includes the document number, national stock number (NSN), nomenclature, routing identifier code (RIC), line item number (LIN), quantity, and unit of issue.

(c) (U) In addition to the mandated AIT media, use of the Defense Transportation Reporting and Control System (DTRACS) or comparable satellite tracking device is encouraged for critical intratheater surface movements. When used, the following minimum data is required for ITV: macro 9 – stopover; macro 10 – single vehicle/convoy departure (include RF tag data if available); macro 11 - vehicle in convoy departure (include RF tag data if available); macro 12 - single vehicle/convoy arrival (include RF tag data if available); macro 23 - convoy vehicle change; macro 24 - vehicle load change; and macro 60 – report changed bumper number. For all shipments having RFID tags, the RFID tag number(s) must be entered into the DTRACS unit under macro 10 or 11 and 12.

(d) (U) When fielded, the Common Access Card (CAC) will be used for timely and accurate capture of personnel accountability and manifest documentation data, essential in force tracking. (Identification of standards/procedures and appropriate data elements are forthcoming).

(2) (U) Timeliness criteria - All AIS updates must be sent to GTN within the following time standards: (IAW DoD Logistics Implementation Plan for AIT, Mar 00, page 3-1, ITV Data Timeliness).

(a) (U) Unit Strategic Movements. The arrival and departure of unit personnel and equipment at all nodes from origin to destination will be visible in GTN *within 1 hour of the event.*

(b) (U) Sustainment Airlift. The arrival and departure of sustainment air cargo and personnel at all nodes from origin to destination will be visible in GTN *within 1 hour of the event.*

(c) (U) Sustainment Sealift. The arrival and departure of sustainment ocean cargo at all nodes from origin to destination will be visible in GTN *within 4 hours of the event*.

(d) (U) Intratheater and Continental United States (CONUS) Movements (with the exception of Unit Strategic Movements (deployments)). The arrival and departure at all nodes of non-unit cargo originating or terminating in theater or CONUS will be visible in GTN *within 2 hours of the event*.

b. (U) Tasks.

(1) (U) AIT Executive Agent (EA).

(a) (U) Publish a prioritized list of assets and forces required to meet Commander (COM) Joint Task Force (JTF) ITV objectives in USAREUR supporting plan. Plan should be based on the following analysis: compare the prioritized joint critical node list from COM JTF to the worldwide ITV instrumentation list. Determine from this comparison where and when deployable capabilities should be employed.

(b) (U) Consolidate and plan for ITV requirements from Component Commanders.

(c) (U) Ensure ITV equipment and forces are sequenced in Time Phased Force and Deployment Data (TPFDD) to meet COM JTF requirements.

(d) (U) Provide AIT deployable capabilities to JTF and Component Commanders as required.

(2) (U) Component Commanders.

(a) (U) Provide ITV instrumentation requirements to Theater ITV EA based on prioritized joint critical node list. Identify AIT/AIS deployable requirements in the earliest feasible movement flow to ensure maximum ITV throughout plan execution.

(b) (U) Capture, process, and transmit shipment information in electronic format to GTN within the time standards listed in paragraph 2.a.(2) above.

(c) (U) Maximize the use of AIS's.

(d) (U) Comply with the provisions of DoD Regulation 4500.32R, MILSTAMP. Attach MSLs with linear and/or two-dimensional bar codes (IAW DoD 4500.32-R, Volume I, 2-B-33) to all rolling stock, pallets, and containers. Ensure that mobility TCNs are created incorporating the UIC/ULN into the TCN IAW DTR Part III and DoD Regulation 4500.32R, Appendix G.

(e) (U) Create RFID tags and attach to all containers and pallets moving to or originating within the Joint Operating Area (JOA).

(f) (U) Send all AIS updates to GTN within the time standards listed in paragraph 2.a.(2) above.

(3) (U) CINCTRANS. Request USTRANSCOM provide deployable AIS/AIT capabilities in support of ITV/TAV at both austere, strategic, aerial and sea ports, and at ISBs and FSBs (for the reception and redeployment of forces), as required.

c. (U) Coordinating Instructions. *Include general instructions applicable to two or more components. Include, if applicable, items such as:*

(1) () *Arrangements concerning logistics automation support of US forces under OPCON of other than a US command.*

(2) () *Agreements with allied nationals and US Government and nongovernment agencies for logistics automation support of allied forces and civilian personnel in areas where US forces are operating.*

(3) () *Advisory services to support allied or host-country logistics automation activities.*

(4) () *Approving authority for use of frequency techniques and management.*

(5) () *Special instruction for operations involving special operations forces.*

d. (U) Specific Guidance. See para 2 above. *In coordination with commanders preparing supporting plans:*

(1) () *Indicate separately the logistic automation requirements to support known and estimated commitments of US, allied, and coalition forces. List the forces to be supported.*

(2) () *Indicate the essential tracking requirements for countries that play a key role in the operational plans that include coalition warfare with friends and allies. Include logistics automation requirements associated with any preconflict options contained in the plan. Determine the essentiality of requirements on the basis of each requirement's contribution to the accomplishment of operational missions. List any assumptions in developing the logistics automation plan.*

(3) () *Prescribe a priority for the fill of each requirement against US and other foreign requirements within the theater.*

(a) () *Prioritize all foreign requirements both by country, and within each country, by requirement. Additionally, assigned to each country a priority to indicate its relative status among all the countries covered in the plan.*

(b) () *Indicate the extent to which US resources will be used to meet expected foreign requirements. For planning purposes, use US consumption rates for forces performing similar combat roles and with similar types of equipment and weapon systems.*

(c) () *Take into account the following fundamental criteria for determining which foreign requirements to include:*

1 () *Consider items that are normally critical to mission accomplishment such as movement of personnel, equipment, and related support items, munitions, POL, etc.*

2 () *Incorporate, where appropriate, like US items from source documents such as the CINC's Critical Items List.*

(4) () *Indicate the expected mode and source of transportation for movement of personnel, equipment, and supplies by inter theater and intra-theater required support for this operation.*

(5) () *Evaluate adequacy of countries' communications infrastructure, US preplanned frequency control arrangements, and the risks associated with those arrangements. Indicate recommended procedures and channels for provision of such support requires congressional or Presidential approval and/or technological transfer determinations, clearly state procedures that establish responsibility for initiating and coordinating the request. Identify commands or organizations responsible for both initiating and coordinating these requests in subparagraph 2b, Tasks, of this Appendix.*

(6) () *Indicate procedures for emergency logistic assistance; e.g., STANAGs and mutual support agreements.*

(7) () *Outline procedures for retrograde operations, including NEO, repairables, etc.*

(8) () *Coordinate procedures to check Service ITV systems connectivity and interoperability with civilian and/or USTRANSCOM (MTMC/AMC) Automated Information Systems (AIS).*

(9) () *Ensure informational needs are met using ITV devices to cover operational requirements. This includes upgrading business processes, attaining the optimum type/mix of Automatic Identification Technology (AIT), minimizing the level of human intervention to collect and transfer data to AIS's, and create an AIS/AIT infrastructure that will interface with the DOD's Global systems.*

e. () Special Guidance. *Include guidance and policy, not discussed elsewhere. If applicable, include the following:*

(1) () *Uniform procedures for maintaining continuous visibility and control of assets of the distribution pipeline.*

(2) () *Concept to perform theater distribution.*

(3) () *Develop and refine deployable “hub and spoke” distribution nodes.*

(4) () *Jointly develop the handoff procedures for Service contingency responsibilities and relationships to allied and coalition countries concerned.*

(5) () *Identity of specific collection locations where non-US personnel, equipment, and supplies may be required to interface.*

(6) () *Procedures for using common joint business rules for personnel, equipment, and supplies in the operational area.*

3. () Administration and Logistics. *Refer to Annex D, Logistics. Provide a concept for furnishing logistic and administrative support for logistics automation activities.*

4. () Command, Control, Communications, and Computers Systems. *Summarize special C4 systems and command procedures required for conducting logistics automation operations. Refer to appropriate section of Annex K.*

APPENDIX D

Frequency Issues1. **References.**

- a. DoD Directive 4650.1, Management and Use of the Radio Frequency Spectrum, Jun 87
- b. United States European Command Directive 100-6, Management and Use of the Radio Frequency Spectrum, Dec 94
- c. USEUCOM Spectrum Management Manual (SMM-1), Feb 98

2. **Explanation of Terms.**

a. **The International Frequency Support Office (IFSO), of Spectrum Management Division (HQ USEUCOM J6-F)**, coordinates radio frequency supportability actions with Federal Republic of Germany (FRG) and non-NATO countries in the USEUCOM area of interest (AOI). Manages reported cases of frequency interference within FRG, coordinating between FRG and DoD components to resolve interference problems.

b. **USEUCOM Joint Frequency Management Office (JFMO), Europe**, manages the USEUCOM portion of the Frequency Record Resource System (FRRS) and has responsibility and authority for all frequency allocations and assignments within the USEUCOM area of responsibility and area of interest.

c. **USEUCOM Frequency Management Field Office (FMFO), Brussels, Belgium (ECJ6-F-B)**, coordinates spectrum management and policy between the US military frequency management community and NATO Headquarters Frequency Management Sub Committee (NHQ FMSC). FMFO is the final assignment authority for US Forces operating within NATO nations (excluding the FRG), new/prospective member nations, the NHQ FMSC Frequency Management Branch, and USEUCOM and its component commands.

3. **General.**

a. **Host Nation Frequency Supportability.** The process by which host nations analyze the technical parameters of radio frequency radiating equipment to be operated within their borders. It ensures proposed equipment can operate without causing interference to other equipment operating in the same electromagnetic environment. Without Host Nation frequency supportability certification, equipment cannot be operated within a nation's borders. Coordination for frequency supportability is a long process, with the lead-time for coordination taking 6-18 months at minimum. All radio frequency radiating equipment used by US forces require frequency supportability coordination.

(1) **DD Form 1494, Application for Frequency Supportability.** Official document used to coordinate Host Nation frequency supportability.

(2) **Host Nation Frequency Supportability Process.** IAW DoD Directive 4650.1, Program Managers submit DD Form 1494 to United States Military Communications and Electronics Board (USMCEB) for JF12 processing. USMCEB reviews the form, provides a JF12 number, and following foreign nation releasability instructions, forwards the request to CINCs for Host Nation coordination. After receiving the JF12 papers, the CINCs submit them to Host Nations for supportability comments. CINCs notify USMCEB via message once the Host Nation responds with its supportability comments. A JF12 library of supportability papers coordinated for operation within the CINC's respective AOR is maintained within the ECJ6.

(3) Host Nation certification of frequency supportability for a piece of equipment does not guarantee nor grant operating frequencies, nor does it grant approval to operate. Only frequency assignments and approvals grant operating authority. Operating frequencies are coordinated after frequency supportability is granted.

b. **Frequency Assignment and Authorization:** Host Nation assignment and authorization of an operating frequency is based on pre-approved, narrowly defined provisions that identify specific equipment; emitting at specific parameters; in specific locations (grid coordinates); for a specific period of time.

(1) **Germany.** Component Frequency Manager submits a Standard Frequency Account Format (SFAF) to the IFSO who translates it to the German version of the document. This document is reviewed by German Civil Agencies and the German National Radio Frequency Agency (NARFA), which is the approving authority within Germany. Once approval is received, the coordinated SFAF is filed at both ECJ6F and the Component Frequency Manager Office for reference.

(2) **NATO Nations (except FRG).** Component Frequency Manager submits an SFAF to the FMFO in Brussels, Belgium for coordination with Host Nation(s) for frequency supportability and final frequency approval.

(3) **Non-NATO Nations.** Component Frequency Manager submits an SFAF to the JFMO at ECJ6-F for coordination with Host Nation(s) for frequency supportability and final frequency approval.

c. **Frequency Assignment Modifications.** Proposed technical and/or operational modifications to frequency assignments (such as frequency, bandwidth, power, location, usage period, antenna height/gain/radiation pattern, etc.) must be coordinated with the original assignment authority before any notification or change to permanent records is made. Movement of radio frequency emitting equipment across the street, to another building, or even another location within the same warehouse may warrant the drafting of an entirely new proposal, as it will be in violation of the specific provisions defined in the frequency authorization document.

How do I get a frequency assigned for my mission?

The first step is to contact the Frequency Management section of your service's component. They are responsible for component frequency assignments within the theater.

4. Component Frequency Managers.

- USAREUR - 380-5347
staff@fmo-jsmsw.5sigcmd.army.smil.mil
freq@hq.5sigcmd.army.mil
- USAFE - 480-2592
usafecss.scof@ramstein.af.smil.mil
scof.fm@ramstein.af.mil
- SOCEUR – 430-4589
bohannos@soceur.eucom.smil.mil
- USNAVEUR - 235-4133
cn613@navetur.navy.smil.mil
- MARFOREUR – 431-4352
warderm@ex.mfe.usmc.smil.mil

For more information on frequency issues and regulations visit the HQ USEUCOM J6-F SLAN website at: www1.eucom.smil.mil/ecj6-f/.

APPENDIX E

USEUCOM Total Asset Visibility (TAV) Task Force Charter

1. **Name of Organization:** USEUCOM Total Asset Visibility (TAV) Task Force
2. **Date Chartered:** 1 December 1996 (revised 7 August 00)
3. **Scope:** The USEUCOM TAV Task Force responsibilities encompass the oversight of all aspects of TAV for USEUCOM, including hardware, software, networking, development methodologies, training, doctrine, policies and procedures, data security, and cost/benefit analysis. The USEUCOM TAV Task Force is a policy and advisory group meant to complement, not compete with, overall United States Transportation Command (USTRANSCOM) and Department of Defense (DoD) In Transit Visibility (ITV) programs.
4. **Purpose:** In order to achieve the goals and objectives of the DoD ITV program, the USEUCOM TAV Task Force will assist USEUCOM J4 PM-LIS with the development, review, evaluation, and implementation of the USEUCOM Directive (ED) 66-2, Policy for Theater Asset Visibility. This policy requires a dedicated, timely, and comprehensive process to ensure it captures the strategies necessary to meet the commander's intent. ED 66-2 must be consistent with the DoD Logistics Implementation Plan for Automatic Identification Technology (AIT).
5. **Responsibilities:** The USEUCOM TAV Task Force will:
 - Review ED 66-2, USEUCOM's Policy on Theater Asset Visibility.
 - Develop the theater AIS/AIT infrastructure.
 - Ensure that implementation plans developed by USEUCOM, Service Component (USAREUR, USAFE, USNAVEUR, MARFOREUR) and Sub-Unified (SOCEUR) Commands are in accordance with this document.
 - Identify and oversee AIT and logistics AIS integration issues, and establish implementation timelines.
 - Advise USEUCOM J4 on all AIS/AIT issues.
 - Comply with the DoD Logistics Implementation Plan for AIT.
 - Provide USEUCOM J4 PM-LIS an independent assessment of Service Component and Sub-Unified Commands' implementation of ED 66-2, USEUCOM's Policy for Theater Asset Visibility.

- Develop CINC Initiatives Fund (CIF)/Program Objective Memorandum (POM)/Integrated Priority List (IPL) documentation as needed and prepare programs and budgets to support the time phased implementation of AIS's/AIT's in the USEUCOM AOR.
- Oversee the fielding (NET/BOIP) and the development of training requirements for AIS's/AIT's that are fielded within the USEUCOM AOR.
- Assist USTRANSCOM in the development of metrics to measure adherence to the timeliness criteria set within the DoD Logistics Implementation Plan for AIT.
- Monitor theater-wide progress in meeting DoD's data timeliness criteria.
- Ensure TAV Task Force members network with appropriate DoD and civilian agencies to leverage ongoing initiatives, and to reduce the duplication of effort.

6. **Composition:** Each USEUCOM staff agency (J1, J3, J4,J6) and each Component and Sub-Unified Command Headquarters is given one vote and comprise the voting membership of the TAV Task Force. The USEUCOM Director of Logistics and Security Assistance will cast a tie-breaking vote if required.

7. **CHAIRPERSON.** USEUCOM Director of Logistics and Security Assistance.

8. **VOTING MEMBERS.** While agencies above are given a single vote, they are not limited in the number of representatives who may attend meetings. In addition, the USEUCOM TAV Task Force will consist of adjunct members representing a wide variety of organizations and agencies.

- USEUCOM J4 Programs and Mobility Division (Logistics Information Systems (LIS))
- USEUCOM J1 (for Joint Personnel Asset Visibility issues)
- USEUCOM J3
- USEUCOM J6
- USAREUR Office of the Deputy Chief of Staff for Logistics (ODCSLOG)
- USAFE-LG
- USNAVEUR N4
- MARFOREUR G4
- SOCEUR SOJ4

9. **ADJUNCT MEMBERS.** Will serve in an advisory role to the USEUCOM TAV Task Force. These would include, but are NOT limited to representatives from the following organizations/agencies:

- USEUCOM J4 Joint Movements Branch
- USEUCOM J4 Mobility Branch
- HQ 21st Theater Support Command (TSC)
- 1st Transportation Movement Control Agency (TMCA)

- 200th Theatre Army Materiel Management Command (TAMMC)
- 1st Personnel Command (PERSCOM)
- Component Communications Agencies (i.e. 5th Signal Command)
- USEUCOM Joint Total Asset Visibility (JTAV) liaison
- USEUCOM ECMD
- USEUCOM TRANSCOM Liaison Officer (LNO)
- USEUCOM MTMC LNO
- USEUCOM Military Sealift Command (MSC) LNO
- AMC (USAFE) LNO
- NATO Command and Control and Communications (C3) Agency
- Warrior Prep Center
- DLA Europe
- Army Materiel Command–Europe
- V Corps G3 Deployment Branch
- SETAF G4
- MTMC–Europe (Operations)
- AFMC
- Combat Logistics Support Squadron (CLSS)

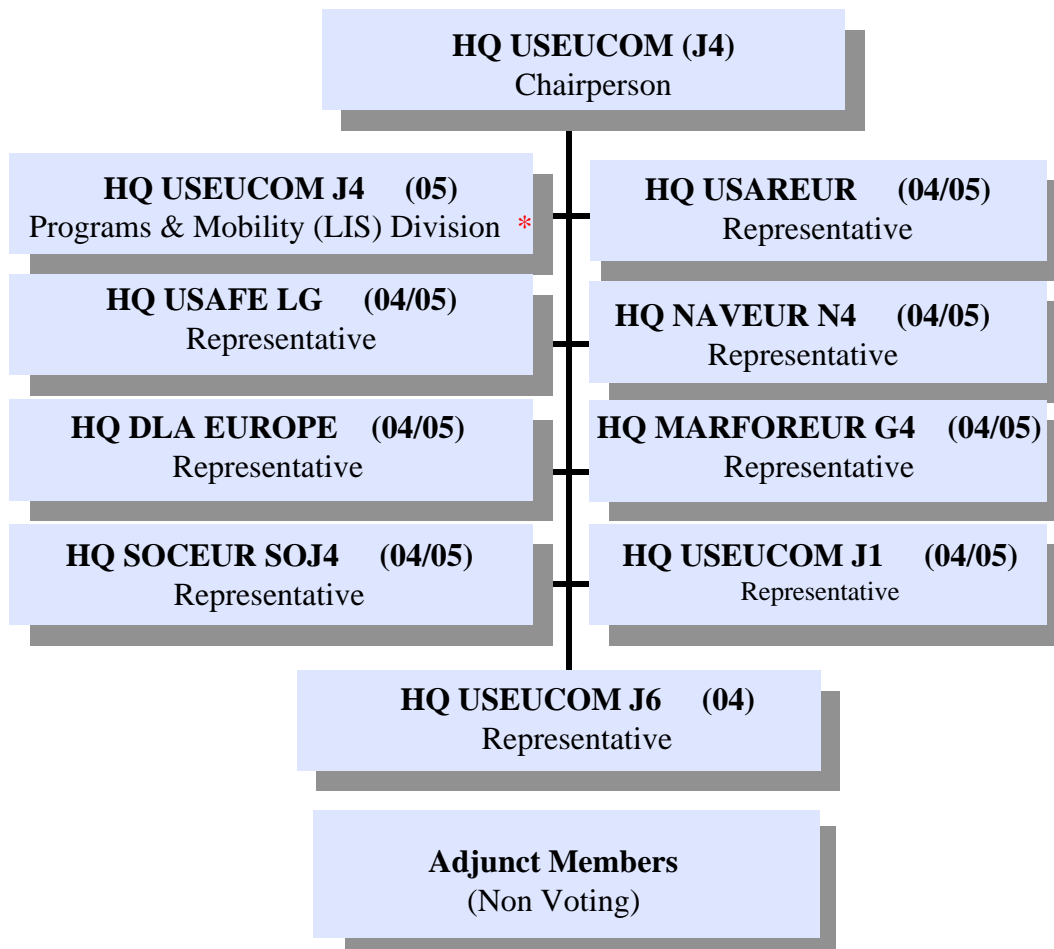
10. **Issues.** The USEUCOM TAV Task Force is responsible for addressing the following issues within their AOR:

- Functional Architecture
- Technical Architecture
- Data Standardization
- System Standardization
- Doctrine, Policies and Procedures (as applicable)
- Funding (for fielding and sustainment of ITV systems and related training).
- Manpower Issues
- Communications Requirements
- ITV Data Security
- NATO Interoperability
- Fielding, Training, and Distribution

11. **USEUCOM TAV Task Force Meetings:** The USEUCOM TAV Task Force will meet on a semi-annual basis, in conjunction with the TAV Taskforce Conference, or as directed by the Chairperson.

12. **USEUCOM TAV Task Force Charter:** This document is a “living document” and can be codified as necessary at any time by a simple majority vote of members.

Fig 1. USEUCOM TAV TASK FORCE WORKING GROUP



* Acting chairperson in directors absence.

APPENDIX F

Acronym List

2D Bar Code	Two Dimensional Bar Code
AACA	Army Airlift Clearance Authority
AALPS	Automated Air Load Planning System
ADANS	AMC Deployment Analysis System
AIS	Automated Information System
AIS's	Automated Information Systems
AIT	Automatic Identification Technology
AMC	Air Mobility Command (USAF)
AMHS	Automated Messaging Handling System
AMS	Automated Manifest System
ANSI	American National Standards Institute
AOI	Area of Interest
AOR	Area of Responsibility
ASC	Accredited Standards Committee
ASIFICS	Airlift Services Industrial Fund Integrated Computer System
ATLASS	Asset Tracking Logistics and Supply System
C2	Command and Control
C2IPS	Command and Control Information Processing System
C3	Command and Control and Communications
C4I	Command, Control, Communications, Computers, and Intelligence
CAC	Common Access Card
CALM	Computer Aided Load Manifesting
CAPS II	Consolidated Aerial Port System
CD	Compact Disc
CD-ROM	Compact Disc-Read Only Memory
CDRUSAREUR	Commander U.S. Army Europe
CFM	Consolidated Freight Management System
CIF	CINC Initiative Fund
CINC	Commander-in-Chief
CINCEUR	Commander-in-Chief, Europe
CINCTRANS	Commander-in-Chief, Transportation Command
CIO	Chief Information Officer
CMOS	Cargo Movement Operations System
COA	Course of Action
COE	Common Operating Environment
COM	Commander
CONUS	Continental United States
COP	Common Operational Picture
CRQS	Channel Requirements Quota System
CSE	Combat Support Enhanced
DCSLOG	Deputy Chief of Staff for Logistics, Army

DD	Department of Defense (Forms)
DEERS	Defense Enrollment Eligibility Reporting System
DELA	Drexler European License Association
DII	Defense Information Infrastructure
DISA	Defense Information System Agency
DLA	Defense Logistics Agency
DoD	Department of Defense
DODIC	DoD Identification Code
DTRACS	Defense Tracking Reporting and Control System
DTR	Defense Transportation Regulation
DTS	Defense Transportation System
DTTS	Defense Transportation Tracking System
DUSD(L)	Deputy Under Secretary of Defense (Logistics)
EA	Executive Agent
EDI	Electronic Data Interchange
EC	European Community
ECD	Estimated Completion Date
ECJ4	Logistics and Security Assistance Directorate
ECJ6	Command Control and Communications Systems Directorate
ECMD	European Command Surgeon
ED	European Directive
ETADS	Enhanced Transportation Automated Data System
FACTS	Financial Air Clearance Transportation System
FM	Field Manual
FMFO	Frequency Management Field Office
FORSCOM	U. S. Army Forces Command
FRG	Federal Republic of Germany
FRRS	Frequency Record Resource System
FSB	Forward Staging Base
FSS	Forward Supply Support System
FY	Fiscal Year
GATES	Global Air Transportation Execution System
GBL	Government Bill of Lading
GCCS	Global Command and Control System
GCCS COP-CSE	GCCS Common Operational Picture – Combat Support Enhanced
GCSS	Global Combat Support System
GDSS	Global Decision Support System
GTN	Global Transportation Network
HAZMAT	Hazardous Materiel
HERO	Hazards of Electromagnetic Radiation to Ordnance
HHT	Hand-Held Terminal
HOST	Headquarters On-Line System for Transportation
HQ	Headquarters
IAW	In Accordance With
ICC	Integrated Circuit Chip

ID	Identification
IDS	Integrated Deployment System
IFSO	International Frequency Support Office
INMARSAT	International Maritime Satellite
IPL	Integrated Priority List
ISB	Intermediate Staging Base
ITO	Installation Transportation Officer
ITRAM	International Traffic Management System
ITV	In-Transit Visibility
J1	Manpower, Personnel, and Administration Directorate
JCS	Joint Chiefs of Staff
JDSS	Joint Decision Support System
JFC	Joint Force Commander
JFMO	Joint Frequency Management Office
JFRG	Joint Forces Requirements Generator
JOA	Joint Operating Area
JOPEs	Joint Operation Planning and Execution System
JPEC	Joint Planning and Execution Community
JPMO	Joint Program Management Office
JTAV	Joint Total Asset Visibility
JTF	Joint Task Force
LAN	Local Area Network
LIN	Line Item Number
LIPS	Logistics Information Processing System
LIS	Logistics Information Systems
LNO	Liaison Officer
MAGSTRIP	Magnet Strip
MAGTF	Marine Air Ground Task Force
MARFOREUR	Marine Forces Europe
MDSS II	Marine Air Ground Task Force, System II
MDL	MAGTF Data Library
MILSTAMP	Military Standard Transportation and Movement Procedures
MIPS	Marine Integrated Personnel System
MOA	Memorandum of Agreement
MSC	Military Sealift Command
MSL	Military Shipping Label
MTF	Message Text Format
MTMC	Military Traffic Management Command
NAOMIS	Navy Material Transportation Office Operations and Management Information System
NARFA	National Radio Frequency Agency
NATO	North Atlantic Treaty Organization
NCA	National Command Authorities
NCC	Network Communications Center
NEO	Noncombatant Evacuation Operations

NHQ FMSC	NATO Headquarters Frequency Management Sub Committee
NIPRNET	Non-Classified Internet Protocol Router Network
NLT	No Later Than
NSN	National Stock Number
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
OMC	Optical Memory Card
OPR	Office of Primary Responsibility
OPORD	Operation Order
OPREP	Operation Report
PDF	Portable Data File
PERSCOM	Personnel Command (Army)
PIN	Personal Identification Number
PKI	Public Key Infrastructure
PLANORD	Planning Order
PM	Programs and Mobility Branch, USEUCOM J4
PM	Product Manager (for AIT)
PMO	Program Management Office
POC	Point of Contact
POD	Port of Debarkation
POE	Port of Embarkation
POM	Program Objective Memorandum
PRAMS	Passenger Reservation and Manifesting System
RAPIDS	Real-time Automated Personnel Identification System
RCAPS	Remote Consolidated Aerial Port System II
RF	Radio Frequency
RFDC	Radio Frequency Data Communications
RFID	Radio Frequency Identification
RGATES	Remote GATES
RIC	Routing Indicator Code
RITV	Regional In-Transit Visibility
ROM	Read Only Memory
RSOI	Reception, Staging, Onward Movement and Integration
SAAM	Special Assignment Airlift Mission
SATCOM	Satellite Communications
SBSS	Standard Base Supply System
SFAF	Standard Frequency Account Format
SHADE	Shared Data Environment
SIPRNET	Secret Internet Protocol Router Network
SITREP	Situation Reports
SLAN	Secret Local Area Network
SMM	Spectrum Management Manual
SOCEUR	Special Operations Command Europe
SOP	Standard Operating Procedures
SPOD	Seaport of Debarkation
SPOE	Seaport of Embarkation

SPRACS	Second Generation Passenger Check-In System
SRP	Soldier Readiness Processing
SSA	Service Support Agreements
SSN	Social Security Number
ST	Short Tons
TAA	Tactical Assembly Area
TAMMC	Theatre Army Materiel Management Command
TAV	Total Asset Visibility
TBD	To Be Determined
TC-ACCIS	Transportation Coordinator's Automated Command and Control Information System
TC-AIMS II	Transportation Coordinator's Automated Information for Movements System II
TCMD	Transportation Control and Movement Document
TCN	Transportation Control Number
TDC	Theater Distribution Center
TMCA	Transportation Movement Control Agency
TMO	Transportation Management Office
TMS	Transportation Management System
TPFDD	Time Phased Force and Deployment Data
TSC	Theater Support Center
UIC	Unit Identification Code
ULN	Unit Line Number
UNAAF	Unified Action Armed Forces
USAFE	United States Air Force, Europe
USAREUR	United States Army, Europe
U.S.C.	United States Code
USCINCEUR	United States Commander in Chief, Europe
USEUCOM	United States European Command
USMCEB	United States Military Communications and Electronics Board
USNAVEUR	United States Navy, Europe
USTRANSCOM	United States Transportation Command
WPS	Worldwide Port System
WWW	World Wide Web